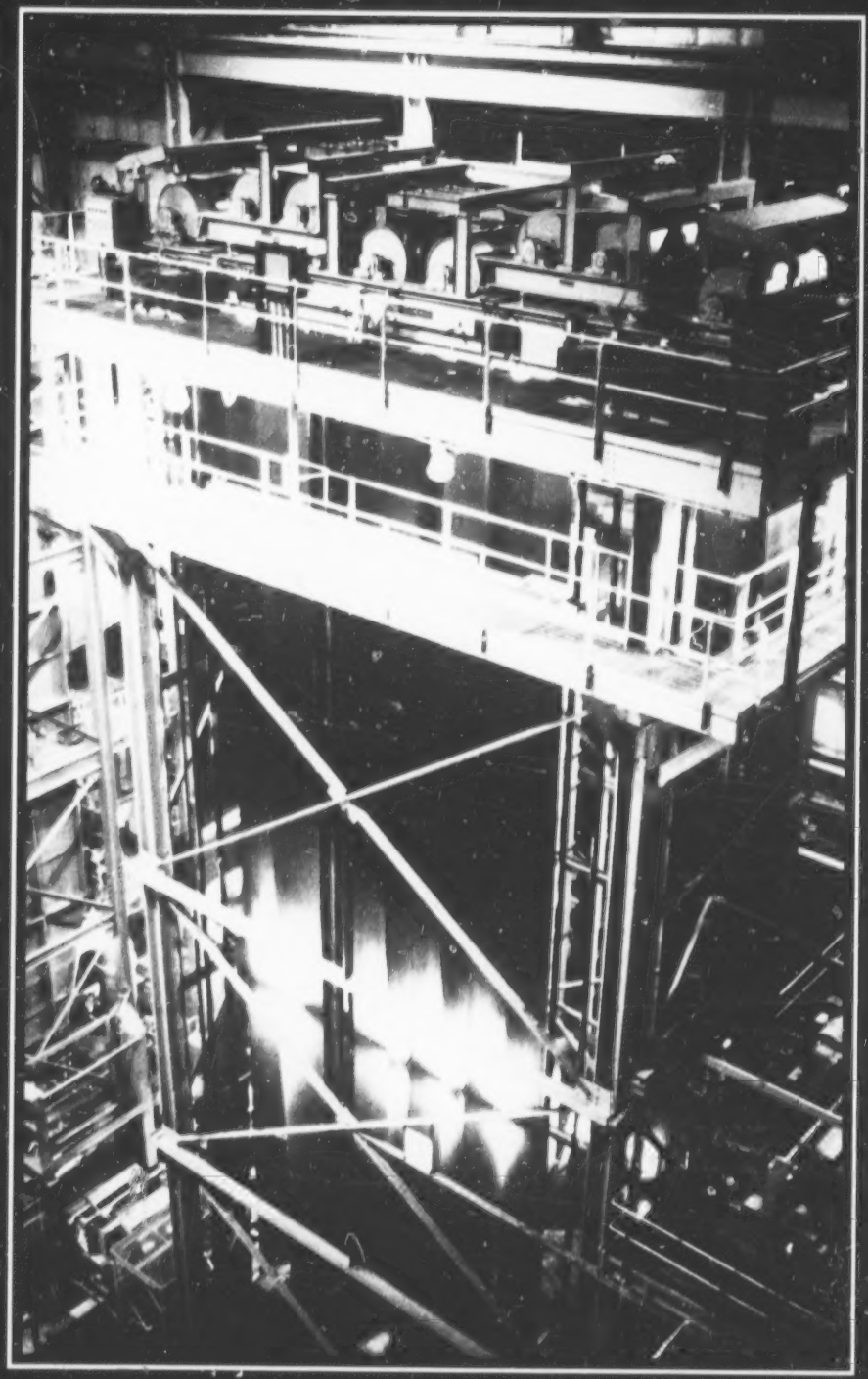
CHILTON'S

October 1, 1984

IRON AGE METALS PRODUCER



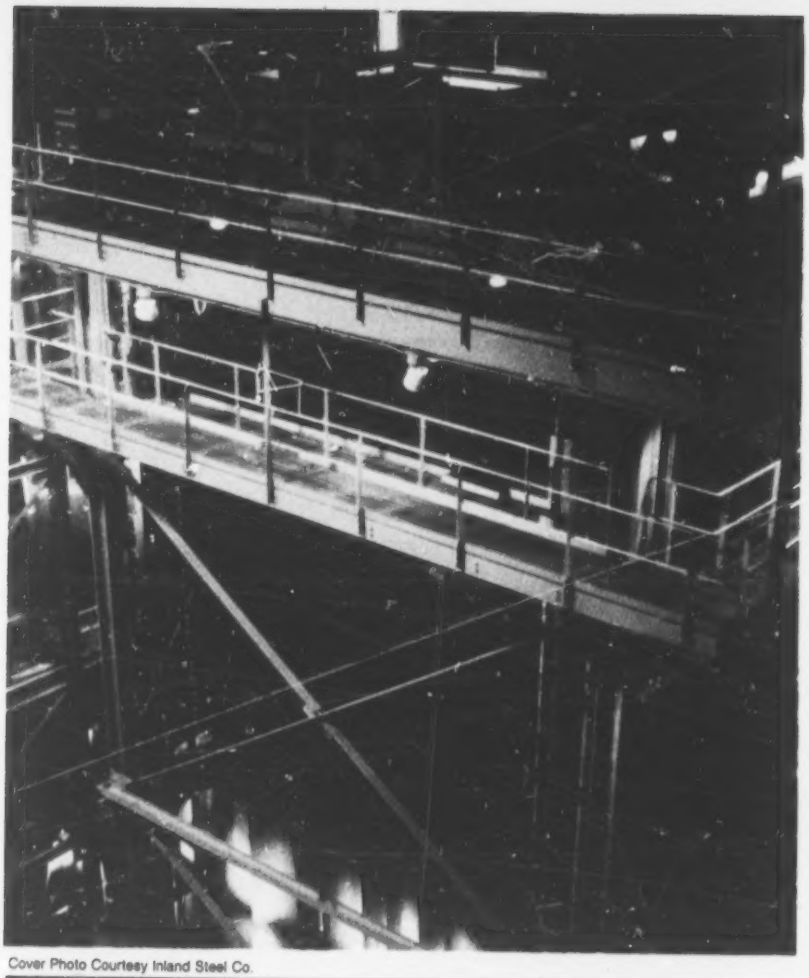
HIGH STRENGTH STEEL SIDETRACKED, BUT NOT ROADBLOCKED

4th Quarter Forecast: Does The Recovery Have Staying Power?

Are Our Nuclear Power Plants Cracking Up?

OCTOBER 1, 1984 VOL. 227, NO. 19

CHILTON'S IRON AGE METALS PRODUCER



Cover Photo Courtesy Inland Steel Co.

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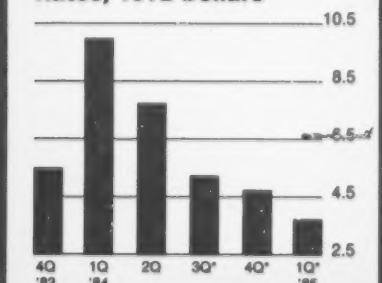
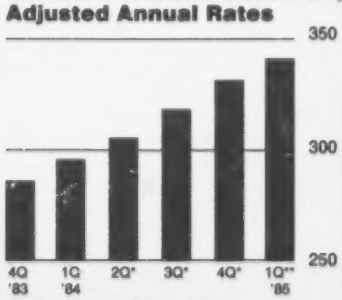
4TH QUARTER FORECAST: MORE MUSCLE THAN EXPECTED

GNP
Pct Increases at Annual Rates, 1972 Dollars



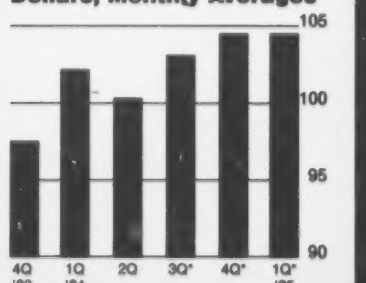
*Forecast—IA
Source: U.S. Commerce Dept.

Plant Spending
Billions of Dollars Seasonally Adjusted Annual Rates



*Planned—as reported by business
*Forecast—IA
Source: U.S. Commerce Dept.

New Orders, Durable Goods Billions of Dollars, Monthly Averages



*Forecast—IA
Source: U.S. Commerce Dept.

BY JOHN BAXTER

The economy has staying power. Several quarters ago when economists were peering through the mist and seeing the edge of a cliff just ahead, they were fooled out of their shoes when the next quarter's growth figures were announced. This happened not just once, but several times.

Slowdown signs are continuing.

And just about everyone seems to find that encouraging. Nobody wants a blowout of good times. Temperance is equated with durability.

The tempering signs are all around.

Growth of the overall economy in the second quarter slowed to a 7.6 pct annual growth pace. That was down from a red-hot 10.1 pct pace in the previous period.

The index of leading indicators was down in July for the second straight month. That's the first time it fell in back-to-back months since early 1982.

New orders received by durable goods producers flip-flopped along a plateau over the three-month, May-July period. As a matter of fact, July orders, at $100.5 billion were well below the $105.2 billion level hit back in March.

Corporate profits in the second quarter were widely viewed as 'disappointing.' They rose $2.3 billion to $152.9 billion on an after-tax basis.

Consumer confidence, too, has turned a pale color. A Conference Board survey stated flatly that consumer confidence leveled off in August.

Most of these trend signs would be expected to appear about now. The recovery is 22 months old, and at that age it can't keep on climbing stairs two steps at a time.

Actually, the slowing pace has come late as far as most economists are concerned. They were calling for lower quarterly growth rates several quarters back.

Now, the name of the game is 'holding on.' As Conference Board analysts put it when announcing their consumer survey, "Expectations (of consumers) have flattened out at an encouragingly high level."

And it seems there are few signs of any actual backsliding taking place in the economy. Hopes for some solid staying power seem reasonable, although some of the hopes have less facts to underpin them than others.

One reason for 'sensing' there is staying power in this recovery, is simply because it's strength and resiliency have been so long under-estimated. Several quarters ago when economists were peering through the mist and seeing the edge of a cliff just ahead, they were fooled out of their shoes when the next quarter's growth figures were announced. This happened not just once, but several times.

Another more readily documented reason for believing the business recovery has staying power, is that no dangerous 'excesses' exist in the economy.

It is excesses that usually put an end to business recovery periods. For one, inventories get too big. That occurs when stocks get out of line with orders and shipments. Then, companies, their stock bins bulging, cut back on their buying. Then the downward spiral starts.

The most recent data on manufacturers' inventory-shipment ratios shows they are in good balance. And the threats of a surging buildup seem to be remote. Ratios have been holding at about 1.45 over the past several months. Compare that to the near-1.70 average ratio for the bad years of 1980-83.

Another excess that has often bumped recovery off the tracks in the past has been strains on plant capacity. But few plants today, even after almost two years of recovery, are busting at the seams—or anything like it. Production-wise, this has been a nice, manageable recovery. One reason is plant operating rates had been so dismally low for so long through 1882 and 1983—down at about 73 pct of capacity.

In July, total industry capacity utilization ran at a 82.5 pct rate. While a good operating rate, it is still comfortably below the pre-recession (1978-79) average rate of 86.6 pct.

Also, there are no excesses in the labor supply situation; the supply is adequate. For example, the unemployment rate among experienced wage and salary workers in July was 6.6 pct. While this jobless rate was down from early-in-the-year rates of about 7.5 pct, the July figure shows there are plenty of experienced workers in the job market. No strain there.

The most important sign of a lack of excesses in the economy is seen, of course, in price restraint. When economists look at the second quarter inflation rate of 3.2 pct (GNP Deflator) holding forth after 22 months of business expansion, they can hardly believe it. Terms used lately by two economists in describing the inflation rate, highlight the point. One said the rate was "simply unbelievable." The other, waxing more poetic, called the rate, "a thing of beauty."

There is another good reason to believe the recovery will hold on—at least through the first half next year. That reason is that this is an election year. The campaigns are underway. And that means simply that no clumsy political hands are likely to tinker with the economic machine until after November.

That economic machine is running pretty smoothly now. And that means that, unfettered by politico-economists it might very likely roll on its own momentum at least through to mid-1985.

As always, there are clouds on the economic horizon that could turn out to be storms moving swiftly towards the now-sunny overhead skies.

At this writing, a strike in the auto industry is a possibility. A strike could impact the economy harder and more quickly than might be guessed. For one, autos have given the recovery a great deal of its zip—the biggest zip of all, in fact.

For another reason, autos are really big users of glass, rubber, metals, textiles, plastics and so on. A sudden stop in autos could cause a supply-line traffic jam that might well lead to posted signs on the recovery road, "highway ends here."

Then, of course, this so-far very suprising recovery could pull one more rabbit out of the hat and take the auto strike in stride. That certainly could be the case if it turned out that any strike was of short duration.

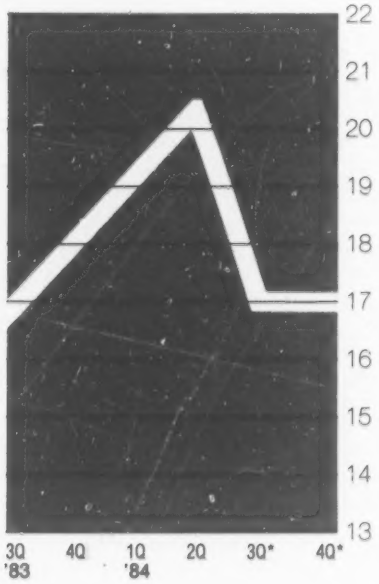
A surprise of surprises could be that this recovery just might run out of surprises. It may have little steam left after posting those red-hot annual rate economic growth pushes of 10.1 pct, 9.4 pct and 7.6 pct that came over the last 5-quarter span of time.

But, on balance, the odds seem good that the business recovery will stay on course. It might be at perhaps a less rousing gallop—or even just a stately trot—right through to at least next June. □

STEEL

. . . estimates of steel shipments for 1984 are being lowered again.

Steel Shipments
Millions of Tons



Source: AISI *IA estimate

Foreign steel is the dominant element in the domestic steel picture.

Going into the fourth quarter, imports were blamed for the prolonged lag in the domestic market. Because of the foreign surge, said domestic industry officials, inventory cutting was carrying over to the fourth quarter.

As a result, estimates of steel shipments for 1984 are being lowered again—to about 73 million tons. No one was very hopeful that President Reagan would apply tough controls to foreign shipments.

At the start of the year, domestic producers predicted that imports would be up about 1 million tons from the 17 million tons of 1983. Domestic shipments were expected to rise from 67 million tons to 78 million tons in 1984.

In the first quarter, imports averaged well over 2 million tons a month. The high rate caused concern, but trade specialists said it was a temporary spurt in anticipation of trade curbs. The domestic market was in a strong recovery, so no one was too alarmed.

Imports appeared to be easing in the second quarter. Foreign deliveries fell below 2 million tons in May and below 1.8 million tons in June.

In July, however, imports shot up to more than 2.6 million tons. This record intake came to nearly 33 pct of U.S. supply. The seven-month import total of 15 million tons was up from 8.6 million tons in 1983.

The July import rise coincided with a sharp drop in the orders and shipments of domestic mills. These fell from 6.7 million tons in June to 5.5 million tons in July. There was no domestic pickup in August and shipments of some mills declined in September.

By September, it was clear steel imports could easily reach 25 million tons in 1985. This was 6 million or 7 million tons over earlier estimates and most of the addition was coming at the expense of U.S. producers.

In this setting, domestic steelmakers feared the Reagan Administration would propose a cosmetic program of import control. The agreement that now limits imports from Europe would be left standing. The agreement that supposedly now limits shipments from Japan would be reaffirmed. Orderly marketing agreements would be negotiated with Spain, Korea and Japan.

The Administration could then say it has shielded the domestic steel industry from about 90 pct of its foreign competition. That might be considered true except that voluntary, informal restraints are described by steel men as "rubber-band" agreements.

The agreement with Japan illustrates how flexible voluntary controls can be. Almost nothing is known about this agreement, except that the Japanese indicated they wouldn't disrupt the U.S. market. According to one version, Japan agreed in early 1983 to reduce its shipments by 1 million tons.

That reduction did take place last year. The 4.1 million tons imported from Japan came to 5.1 pct of U.S. supply. Japan's numbers were almost identical with Europe's and it appeared the Japanese were following the Common Market formula.

In the first seven months of 1984, however, more than 3.8 million tons were imported from Japan. That came to 6.5 pct of U.S. supply and there were reports that still larger tonnages were on the way from Japan.

Considerably different is the agreement which limits imports from Europe to about 5 pct of U.S. supply. There are clear-cut limits on most products in this agreement and there is provision for regulating volume. A licensing procedure assures compliance with the specified limits.

The biggest problem with any negotiated scheme is that nearly half the imports are coming from smaller countries and there are a lot of these. Fifteen smaller nations shipped significant quantities of steel to the U.S. last year.

NONFERROUS

Political and business economists have been quick to hail the slowup in economic growth as a big plus, but nonferrous metals companies can't be blamed now for wondering if they have been shut out of the recovery altogether.

Primary and secondary metals prices softened steadily in the third quarter, shipments nosed down for seasonal and other reasons, import pressures continued unabated and the metals companies have not been doing anywhere near as well in the profits column as many of the key industries they supply—such as the automotive and appliance industries.

The automotive industry continues to be the main engine of the recovery, with car production through Labor Day running about 25 pct ahead of last year and truck output looking like a 40 pct gainer with an assist from the minivans. Detroit's metals consumption has been in high gear all year—the increase in car output alone was worth about 70,000 tons to the aluminum industry.

Weakness in free market aluminum ingot prices—with the spot prices on the London Metal Exchange down close to 50¢ a lb late in August—have been sapping strength from the aluminum industry's price structure, notably in the common alloy end of the mill products list. Suppliers have been resorting to pricing at time of order in some cases and increasing distributor discounts.

U.S. producers have trimmed production at domestic facilities (and are hoping their foreign competitors start doing the same) to dry up the surplus. At midyear, ingot production was up in all geographical sectors covered by the International Primary Aluminium Institute except Africa, where production was off about 10 pct because the Volta smelter in Ghana remained idle for lack of hydroelectric power. Free world producers' inventories were up nearly 11 pct at midyear, with the gain in mill products and scrap larger than the gain in primary ingot. North American producers accounted for most of the increases in both categories.

U.S. imports of aluminum mill products were up sharply in the first half. Imports of ingot and scrap also rose.

The copper producers continued to have their own problems with imports. Domestic producers hopes for assistance from Washington were crushed in mid-September when President Reagan rejected the industry's plea. Meanwhile, the U.S. mines were preparing further cutbacks of their own as inventories showed signs of moving upward toward the end of the first half.

Copper prices were weak through the summer season, which covers the vacation at many brass and wire mills. Domestic copper consumption remained strong. U.S. refineries managed a 6.4 pct gain in shipments during the first half (during which refined production was up only 1.2 pct but crude output was up 20 pct) without any advantage in the price department.

A missing ingredient in the copper equation, capital spending, was beginning to stir a bit at midyear, but so was the money market and the threat of rising interest rates began to cast its shadow over the metal markets generally.

Lagging capital equipment business also has impeded recovery in the nickel business again this year. Free market nickel prices trended downward in July and August while the producers strove to keep production in check and work inventories down further.

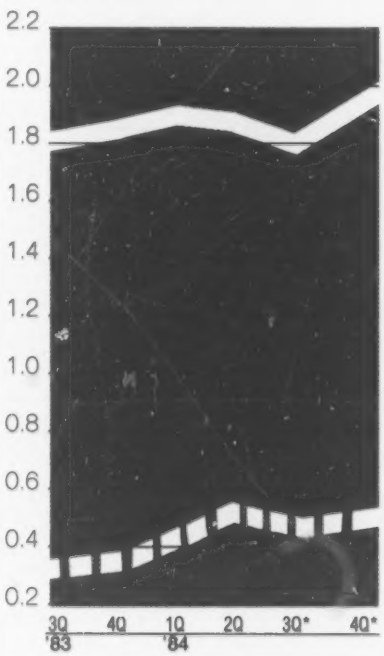
Lead got a lift during the first half from a 20 pct jump in shipments of automotive replacement batteries to 26 million units. The extra 1.5 million or so original equipment batteries which the auto industry needed for its increased production of cars and trucks through late August also helped.

Increased use of galvanized steel by Detroit also gave a boost to zinc. Shipments of zinc and zinc-based alloy castings were running about 20 pct ahead of the 1983 pace at midyear.

U.S. (aluminum) producers have trimmed production at domestic facilities. . . .

Nonferrous Metals Shipments

Millions of Short Tons



Source: American Bureau of Metal Statistics, Aluminum Assn.
*IA estimate

Aluminum
Copper

AUTOMOTIVE

U.S. automakers likely will sell 2 million cars in the fourth quarter. That's about how many they sold in this year's third quarter, but up by 11 pct over last year's fourth quarter.

The 2 million sales in the last quarter will bring auto sales for all of 1984 to 8.3 million domestic units, a jump of 1.5 million units from last year's 6.8 million sales. The voluntary restraint agreement (VRA) has kept import sales steady at 0.6 million units in every quarter of 1983 and 1984.

Production in both the third and fourth quarters this year should come in at just under the 2-million mark.

Dealers presently have almost a 50-day supply of cars. That is less than the 60-day supply they consider best.

By the end of the fourth quarter, dealer supply may rise somewhat: to a 55-day supply, estimated the analyst for one Big 3 automaker.

Consumer confidence in the economy is still high, though not as high as it was at the start of 1984. In January, consumer confidence was at 99.5, the highest in the last decade, said the University of Michigan's Institute for Social Research (Feb. 1966=100). The index dropped to 96.6 in the second quarter.

Automakers expect interest rates to remain at about 13.5 pct through the end of this year and the first half of next. They are forecasting a 13 pct rate in the second half of 1985.

"An increase in automotive interest rates," said one automaker's analyst, "is more of a psychological problem than a monthly monetary problem."

A rate increase of 2 pct, he said, "would increase monthly payments for an average $10,500 car by $7.

Automakers expect the U.S. government to allow more imports when the current VRA expires April 1, 1985.

"I expect the VRA to be continued," said one automotive analyst, "but altered to allow 10 pct more imports. If the government removes VRA completely, that will completely wipe out U.S. small-car production."

Chrysler recently extended its agreement to import Mitsubishi cars until 1995. The No. 3 automaker has negotiated with South Korea's Samsung Industrial Group to build Horizon-type subcompacts in Korea in the late 1980s. GM and Ford are pursuing similar deals in Korea, Japan and Mexico.

One market segment in which the U.S. has gained sales has been compact pickup trucks. Imports used to account for about 90 pct of those sales. But products like the Ford Ranger and Chevrolet S10 have enabled U.S. automakers to gain 50 pct of that market segment. Mini vans like Chrysler's Caravan and utility vehicles like AMC's Cherokee Jeep, Chevrolet's Blazer and Ford's Bronco II also have established American dominance in those markets.

U.S. automakers vigorously deny charges that the VRA is the big reason for their big profits.

"Most consumers are paying more for new cars than they did for the cars they trade in," said the chairman of one of the Big Four companies in a recent speech. "But most of the difference is a matter of deciding to buy a larger vehicle and equip it with more options.

"Prices of U.S. small cars, most affected by the import restraints, have increased by just 2 pct a year—about half the rate of inflation."

For the 1985 models, automakers cut or froze prices on the small cars but raised them for bigger ones. Price increases of the Big Four averaged about 2 pct, or $225 per car.

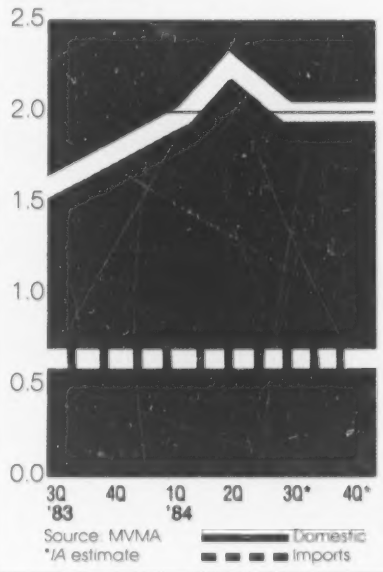
The automakers' current profits are large, but so were their earlier losses.

"Total losses and investments for the Big Four companies during 1980-83," noted one automotive chairman, "came to $42 billion. We earned $6.5 billion in the first half of 1984. We're still about $35.5 billion shy of getting back to the starting gate."

The last quarter will bring auto sales for all of 1984 to 8.3 million domestic units.

Automotive, Sales

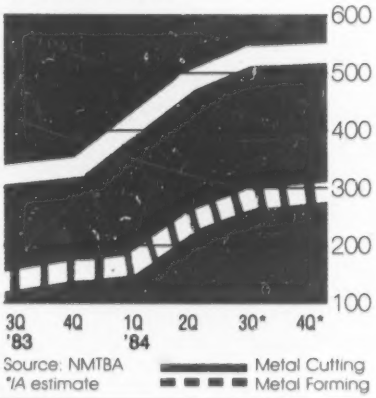
Millions of Units



MACHINE TOOLS; FLUID POWER

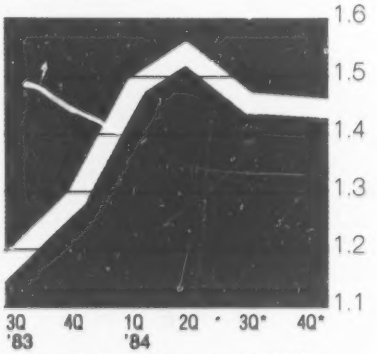
(Machine tool) order books are better than they have been in recent years.

Machine Tools, Net New Orders
Millions of Dollars



Source: NMTBA
*IA estimate

Fluid Power, Shipments
Billions of Dollars



Source: Dept. of Commerce and NFPA
*IA estimate

MACHINE TOOLS—The long-awaited capital goods recovery simply hasn't arrived for machine tool builders.

Orders are up. "But, up from the worst recession anyone can remember," notes one builder.

Coupled with the dismal past two years is the performance of the Asian builders, particularly Japan.

Imports now have almost 40 pct of the U.S. market and, unless President Reagan gives domestic builders the protection they seek, that figure seems sure to rise.

Sources in Washington vary in their predictions about import quotas. Some still expect a White House nod on the industry's petition which would give U.S. builders a five-year, 85 pct share of the domestic market. Others expect half-a-loaf, with only selected types of machine tools given protection.

Meanwhile, the order books are better than they have been in recent years. "That's some consolation," said one builder. The rest of 1984? "More of the same. I mean a slow return. A slow recovery for us," he added.

But, even with a steady return to normal business in the industry, there is another cloud on the machine tool horizon and it could exacerbate the import problem—capacity, or more correctly, under-capacity. If the industry's fortunes improve steadily, as they have been for many months now, then, without any increase in capacity, lead times will surely lengthen. It was largely long lead times that opened the door to Japan in the first place during the auto-pushed boom in tools a few years ago.

Meanwhile, many in the machine tool industry expect their recovery to be slow, but steady.

Companies in general expect the rest of 1984 to be characterized by steady but slow growth with domestic sales levels by mid-1985 at or perhaps even exceeding the near-$6 billion level of the recent past. The big question is how that hoped-for sales level will divide.

FLUID POWER—A slight summer cold seems to have hit the fluid power industry, and it could hang on through the fourth quarter.

That's not enough to stall the good recovery fluid power has scored in 1984. There's still reason to believe that fluid power equipment builders, both hydraulic and pneumatic, will score their best year in dollar volume since 1981.

Much of the caution about the coming months stems for the unexpected pattern the industry orders followed over the summer. On the basis of surveys from the National Fluid Power Association, orders didn't show quite the June strength that many in the industry had anticipated.

July didn't show as much of a seasonal drop in shipments as usual. But August, which seasonally snaps back upward from the July low, doesn't seem to be jumping as much as it should.

That concern over the fourth quarter isn't clearly spelled out in a good-sized sample of orders yet. Any feeling that the steam has gone out of the industry's recovery is based more on lead indicators or subjective opinions, than an actual change in the order rate.

Much of the concern is pegged to the heavy mobile equipment markets, which have grown more cautious about their own fourth quarter outlook.

That coupled with a little less demand from machine tool builders and concern over the effect of an auto strike on light hydraulic systems has produced some downward revisions in fourth quarter forecasts.

This isn't unexpected. Only in the early stages of a strong recovery is the industry's fourth quarter volume apt to exceed its third quarter, even allowing for the usual July slowdown.

Export is doing little to help offset the domestic market slip. It's still plagued by the strong U.S. dollar, which is throwing some business into overseas plants.

INDUSTRIAL COATINGS; PLASTICS

INDUSTRIAL COATINGS—Makers of industrial coatings expect to ship about 100 million gallons of their products in the fourth quarter. That's an 11 pct increase over the estimated 90 million gallons shipped in the third quarter; and a whopping 22 pct increase over the 82 million gallons shipped in the fourth quarter of 1983.

The rebound in auto sales has meant big increases in coating shipments to the carmakers—up by 25 pct over last year, according to a vice president of one leading Midwestern company. "So have sales to makers of metal decorating material and business-machine housings," he commented.

Shipments of coatings to furniture companies, noted another VP, have risen this year but will slow in the fourth quarter. He expects such shipments to revive in the first quarter of 1985.

Shipments of coil coatings for residential use have been dropping and will continue to drop, said one industry vice president.

"For all types of coatings," reported the executive, "the market in wall coatings and panels has been static."

Makers of appliances are pretty much committed to using pre-painted steel coil. But so far, they haven't bought a lot of the coil.

"Appliance makers," said one coating executive, "will continue to order big quantities of other types of coatings besides coil in the fourth quarter, as they've done all year. They still haven't made the expected shift to coil."

Third quarter shipments of coil coatings to the appliance industry were slow," he maintained.

To meet U.S. Environmental Protection Agency requirements, the entire coatings industry is using more solids in its products, which means lower weights.

Because of this switch to higher solid coatings, said one executive, "you will begin to see a decrease in the number of gallons shipped by the industry."

PLASTICS—The plastics industry just seems to keep humming right along.

The second quarter came through as expected, and the third quarter experienced a minor seasonal drop of no more than 0.3 pct. The fourth quarter will be expected to regain the strength of the second quarter, and then some.

No matter how you look at it, 1984 shows all the promise of another record year for the plastics industry.

Leading the way among the thermoplastics are nylon, ABS and the vinyl resins. Over in the thermosetting camp, the epoxies and the unsaturated polyester resins are demonstrating unusual strength.

In terms of sales and captive use, plastics are up over last year by 7.3 pct for the first six months. The big gain has been in the thermosets, with an 11.3 pct increase. Though not as impressive, the thermoplastics did show a good gain of 6.7 pct. (Typically, thermoplastic consumption runs about 7 to 8 times that of the consumption of thermosetting resins.)

The plastics industry was riding high during the first quarter of 1981, but went into a tailspin that lasted for about two years. Last year was admittedly a spectacular year, and the pundits are looking for 1984 to be the best one yet.

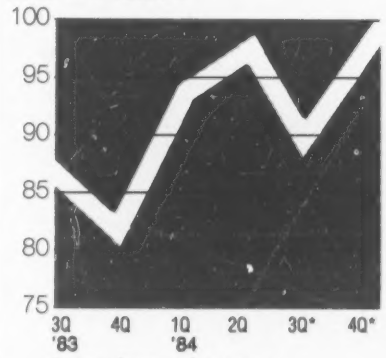
On the production side, styrene acrylonitrile (SAN) resins are up 136 pct, while nylon resins are up by 54.8 pct. Both of these materials, however, take up a small percentage of total plastic usage and production. A strong material, in terms of volume and in terms of increases in production and in sales and captive use, is polyvinyl chloride.

Through April, polyvinyl chloride had shown a 22.7 pct increase in production and a 17.8 pct increase in sales and captive use over the same period last year. In sales and captive use, its volume was 2.4 billion pounds.

There is no doubt that plastics will continue to be a bright spot on the industrial horizon throughout the year.

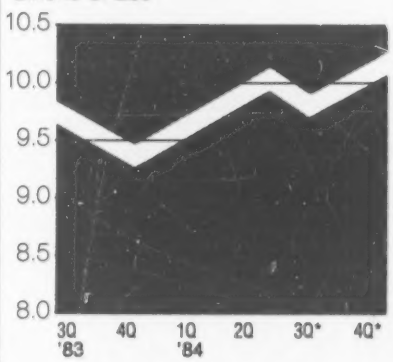
The rebound in auto sales has meant big increases in coating shipments.

Industrial Coatings, Shipments



Source: Dept. of Commerce
*IA estimate

Plastic Resins, Sales & Captive Use



Source: SPI Committee on Resin Statistics, compiled by Ernst & Whinney
*IA estimate

COMPUTERS; INSTRUMENTS & CONTROLS

COMPUTERS—A healthy U.S. economy means a healthy computer business. Shaking off an uncharacteristically slow year (for the computer industry) in 1983, where business only improved 15 pct, the industry should see a pickup of 22 pct by the end of 1984.

In the early months of 1984, a spurt in computer and computer-related equipment sales took place. The jump in sales resulted from an improved economy which has permitted business to send more money to assuage its pent up demand for computers.

In addition, computer products have been more readily available this year than last. The gradual improvement of the European economies has also contributed to improved sales.

The computer industry got off to a fast start this year; sales have held up through the third quarter. A slight slowdown is likely in the fourth quarter due to a tightening of the economy and some price cutting. The specter of rising interest rates could also hurt sales over the next few months.

However, the biggest concern of the industry remains the growing trade deficit of computer products. Computer imports, especially from Japan, continue to outdistance U.S. exports.

Personal computer sales continue to soar. As the economy improves and companies become increasingly profitable, more and more firms are turning to PCs to meet business needs. Not only are these computers filling front offices but they are also beginning to move in greater numbers into the factory. Increasingly, PCs are being used to program, analyze, and even run machinery. PC software that addresses factory floor needs is also selling well.

Mainframe computers have experienced major sales increases through the first nine months of 1984 as have the superminicomputers, especially those linked to computer-aided design/computer-aided manufacturing (CAD/CAM) operations.

INSTRUMENTS & CONTROLS—Sales in instruments and controls have been a surprise. Through the end of the third quarter, sales are up about 10 pct over a year ago.

The year started off strong, with shipments up about 14 pct over 1983 figures. In the third quarter, these shipment gains slowed, but remain higher than forecast. The fourth quarter should see further slippage.

From an industry that expected little growth this year, these increases have come as a welcome surprise. The continuing rebound of the U.S. economy is the main reason. In particular, instrument sales to the appliance and the automotive industry have been strong.

Instruments aimed at the computer, semiconductor, telecommunications, and computer peripheral market continue to be purchased in large numbers. Sales through September are running 20 pct above totals of a year ago.

In the past, a large portion of instruments and controls were exported. With the recession in Europe and the third world countries, export sales have fallen off in recent years. In the last several months, overseas orders, especially from Europe, have picked up and should continue to rise through the remainder of this year. Increases should not be too dramatic, however, because of the continuing strength of the dollar against other currencies.

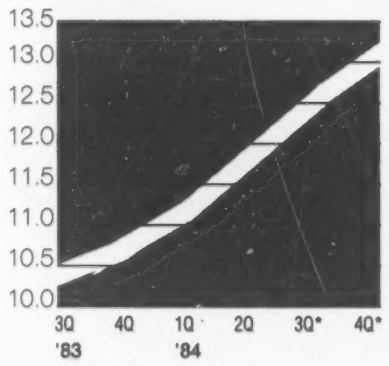
Besides the expensive dollar, increased foreign competition is making overseas markets harder to penetrate. The competition, chiefly Japan, is also stepping its exports to the U.S.

Next year should be an even better year for the industry. According to the Conference Board, the nation's 1,000 largest U.S. manufacturers set a new record for capital appropriations in the second quarter of 1984.

Instrument shipments are closely tied to capital spending, so big capital budgets for 1985 are good news for the instruments and controls makers.

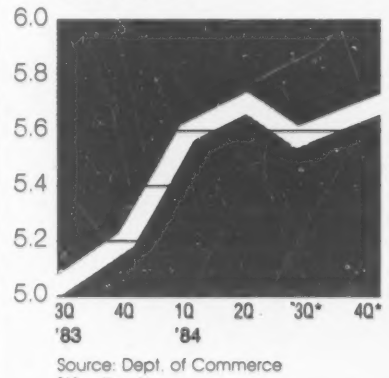
The computer industry should see a pickup of 22 pct by the end of 1984.

Computers, Shipments



Source: Dept. of Commerce
*IA estimate

Instruments & Controls Shipments

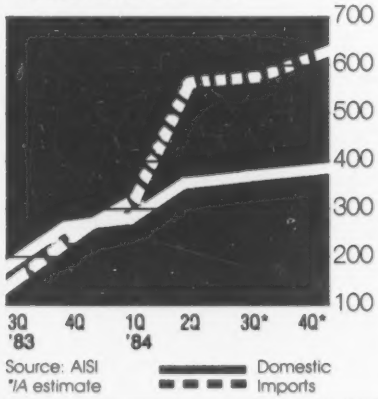


Source: Dept. of Commerce
*IA estimate

OIL COUNTRY; MINING EQUIPMENT

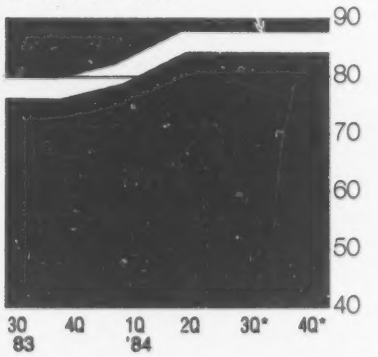
The excess inventories of pipe and tube have begun to evaporate.

Tubular Goods, Shipments
Thousands of Net Tons



Source: AISI
*/A estimate

Mining Equipment, Sales
Millions of Dollars



Total U.S. and export figures, based on present dollars; includes continuous mineers, mobile loading machines, shuttle cars and cutting machines.
Source: Mining Equipment Manufacturers
*/A estimate

OIL COUNTRY—A strong increase in shipments of oil country tubular goods appears likely to continue through the remainder of 1984. Most industry indicators remain strong, and many foresee a growth trend continuing into 1985.

The market is being aided by a number of factors. The rig count utilization rate has climbed steadily since April, and has increased some 12 pct over the comparable period of last year. Crude oil prices have remained stable; most observers foresee that trend continuing through at least the end of 1984. The total footage of oil and gas wells drilled in the U.S. is up nearly 14 pct from last year. Most importantly, the excess inventories of pipe and tube have begun to evaporate, allowing drilling companies and other consumers to buy new product at a level more in line with the pace of activity.

Despite the generally positive trends, there are still some potentially adverse elements that could impact the industry. While OCTG shipments may nearly double from their 1983 levels by the end of this year, they are far below the peak years when domestic mill shipments averaged 2.5 million tons annually. The most positive predictions for 1984 foresee 1.2 million to 1.3 million tons shipped from domestic mills.

Foreign mills have dominated the market for most of the year, and shipments of imports have been outpacing increases in domestic production.

Also, recent pipe and tube consumption has been greater in the carbon grades than the more expensive alloy grades. Suppliers would like to reverse that trend, but recent drilling has been concentrated in shallow wells that can utilize the cheaper product.

Despite these trends, most industry executives remain optimistic. It appears all but certain 1984 will wind up a more profitable year than 1983. Increased drilling activity in the Gulf Coast and new exploration off California are further reasons for optimism.

MINING EQUIPMENT—Mining equipment in some areas, seems to be an industry that has contracted for the duration. This is particularly true in iron ore.

Not only has the steel slump severely damaged iron ore companies, but the threat of a worldwide glut in iron ore looms large over the Great Lakes. In iron ore, the business for equipment makers has been largely maintenance and replacement for the past few years. No new mines in North America are planned and many have closed or are on severely reduced schedules.

If the threat materializes, the once booming upper Great Lakes mining area might revert to forest again, some pessimists predict.

Others are less gloomy about domestic and Canadian iron ore and note that transportation costs as well as the "security" of domestic supply will keep Minnesota, Michigan and Canadian ore preferable for U.S. mills.

Coal mining, on the other hand, remains relatively healthy although that health could turn sickly if the industry fails to reach a new agreement with the United Mine Workers. The contract was scheduled to expire Sept. 30.

Presently, industry observers don't expect a work stoppage and the industry in general is in good shape. Mining equipment manufacturers report business is good and getting better.

Still, the U.S. mines about 830 million tons a year and few expect that number to decline significantly in coming years. Some in the industry expect it to rise significantly in about three years due to various cleaning technologies and the demise of nuclear power.

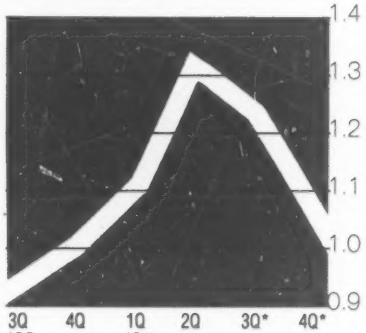
Coal mining equipment companies expect the industry to remain relatively healthy through the foreseeable future.

While the iron ore business is showing negative equipment growth, coal suppliers expect the third quarter of 1984 to be up slightly over the second, but the year to show a gain over 1983 of as much as 12 pct in sales.

CONSTRUCTION; FARM EQUIPMENT

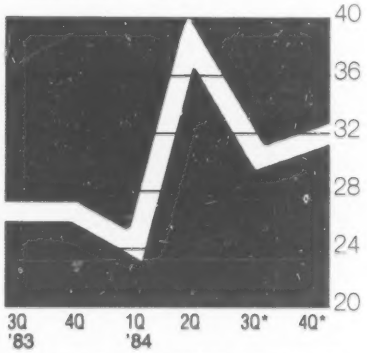
(Construction) machinery builders are cautious about the second half. . . .

Construction Equipment, Shipments
Billions of Dollars



Source: Dept. of Commerce
*IA estimate

Farm Equipment, Wheeled Tractor Sales
Thousands of Units



Source: Farm & Industrial Equipment Institute
*IA estimate

CONSTRUCTION—Despite the sharp gains in construction machinery sales during the first quarter of 1984, machinery builders are cautious about the second half and the first half of 1985.

Distributors about doubled their original forecast for the first half of 1984 and the Associated Equipment Distributors reports that based on a survey of 200 dealers, 1984 sales will be 20 pct over last year.

One problem in the construction machinery market in the past three years has been an oversupply of machinery in dealerships. That situation was correcting itself during 1983, but only at the cost of some sharp cuts in equipment prices. The "fire sales" of 1982 continued into 1983, and the scars were still visible during 1984.

For instance, Caterpillar Tractor reported $3.2 billion sales in the first half of 1984. That's up 58 pct, but it's almost 16 pct under sales in the same period 1982, when construction machinery was in one of its worst declines.

Typically, the heavy industries show a fairly long lag time between the beginnings of an order increase and a gain in actual shipments.

The caution in the outlook, despite the backlog gains, has a lot to do with the continuing strength of the dollar.

The Construction Industry Manufacturers Association reported a 22 pct gain in first quarter exports, but that is still 40 pct below the year-ago numbers. The gains in export began in 1983 and apparently have continued, but from a low base. Export is important to U.S. machinery builders, and some builders historically have made half their sales in export markets.

The *Iron Age* forecast, because of the rising order backlog, may be overly conservative for the second half. Some manufacturers believe the fourth quarter could be their best 1984 quarter, as happened in 1983. Particularly in view of the sales gains at the dealer level in first half.

FARM EQUIPMENT—From Russia with Love? That 11 million ton grain export order from the U.S.S.R. has put some bloom back in the cheeks of U.S. farm forecasters who've been agonizing over falling commodity prices and drought. Usually, a cut in the harvest brings up grain prices, but it hasn't happened.

Will an export order equal to 10 pct of U.S. annual feed grain production pull up agricultural markets? It can't hurt, one veteran analyst said, but didn't feel it was going to help much either. At least, he added, "It's a good sign, but there aren't enough of those good signs yet to be very definitive."

Two major equipment producers have said they will curtail production at some plants during the fourth quarter. Others have been less outspoken, but have privately indicated they were holding at relatively low production schedules despite the on-again, off-again sales fluctuations of the first half.

July tractor shipments dropped again, and somewhat more than seasonally. Combines, the other big-ticket item on the farm machine selling list, have been more of a problem. Shipments of combines were off 25.6 pct in the first six months of this year, according to the Farm & Industrial Equipment Institute. More troubling, the pull-behind implements that were the first to recover in 1983 are also off through the first half of 1984.

So with due appreciation for the new export orders, there's little joy in farm machine circles.

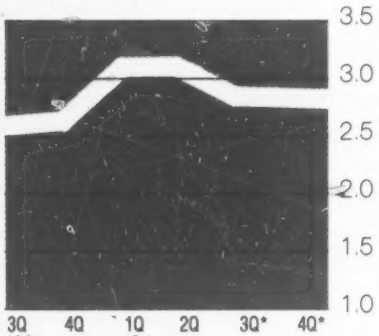
The export sales could feed more dollars back into the farm market later this year, but that would largely help the 1985 equipment market.

The third calendar quarter of any year sees a seasonal drop in farm machine shipments, followed by some gains in fourth quarter. But the fourth quarter gains are closely tied to tax-buys by farmers in December. The October-November selling period can be slow and probably will be in 1984.

CASTINGS; FORGINGS

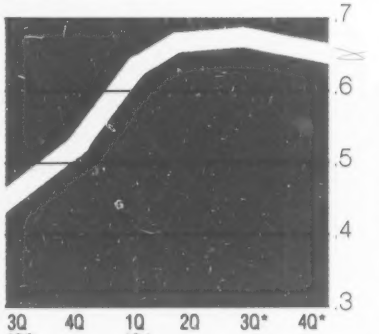
A number of (foundries) say they'll finish this year 20 pct above 1983.

Ferrous Castings, Shipments
Millions of Tons



Source: Dept. of Commerce
*IA estimate

Impression Die Forgings, Shipments
Billions of Dollars



Source: Forging Industry Assn.
*IA estimate

CASTINGS—The copper and brass foundries seem to have held up better in the third quarter than the ferrous foundries and aluminum castings producers.

In aluminum and iron-based castings there's been a little more summer hesitation than can be accounted for by the normal seasonal slump in July, when the bulk of U.S. foundries take their plant vacations.

Some foundries point to a buildup in castings inventories during May and June. This was bigger than the usual inventory increase by customers who are offsetting foundry vacation shutdowns by adding to their inventories.

This still leaves 1984 as a substantially better year than 1983, which itself was over the low castings total for 1982. Even with the downward revisions in the forecast that were made in July, a number of sources say they'll finish this year 20 pct above 1983. That's well in line with the *Iron Age* outlook for third and fourth quarter foundry operations.

A conservative forecast would put third quarter shipments at about 25 pct under the second quarter peak. And fourth quarter would run at about the third quarter shipment levels.

This would allow for a drop in November followed by an upswing in December that should keep the fourth quarter total close to 3 million tons of castings shipments.

It's notable that aluminum, which did better than ferrous castings in 1983, is tending to follow the ferrous castings forecast for the fourth quarter.

This still leaves the problem of the possible auto strike. A long strike could knock out some big captive foundries and pull down second half totals. And it could affect some copper business.

With the continuing strength of auto sales in recent weeks, that could produce a sharp slump and push a lot of make-up business later into the fourth quarter after the auto plants return to business.

FORGINGS—The forging industry continues its slow but steady pace upward.

The third quarter began on an off-note, with July orders for impression die forgings down 26 pct from June bookings. July declines were expected due to traditional plant vacation shutdowns.

More importantly, July totals were a 30 pct increase over 1983 figures. On a year-to-date basis, order bookings through July were up 39 pct compared to 1983.

Preliminary August and September orders are show marked improvement over July. And the fourth quarter should see the gradual growth of the first three quarters continuing.

The industry's rebound remains less than spectacular because of the slower pace in three key markets—aerospace, farm and construction equipment, and oil field goods.

Despite healthy injections of defense spending this year, the aerospace industry continues to be weighted down by the commercial sector. Commercial aircraft deliveries this year will amount to less than half the number delivered in 1980 and 1981.

On the brighter side, orders for commercial airplanes have been on the increase since the second half of 1983. More orders should be forthcoming next year largely because the U.S. commercial airline fleet is aging.

The farm equipment market is not expected to show much strength this year. Farmers are reported to be in bad financial shape and few machinery orders are expected. And the oil field market is still below the peaks hit in the early 1980s, although some forging companies have noted some isolated sparks of life.

The automotive industry continues to churn out cars and demand impression die forgings. Healthy truck and car sales are a chief reason for the growth that the forging industry has achieved this year.

APPLIANCES; MATERIAL HANDLING

APPLIANCES—The appliance industry, a strong performer last year, is topping those efforts this year. Well into the third quarter, total major appliance units shipped are running some 30 pct above the 1983 pace.

The industry has been holding up much better than expected. Earlier this year experts were predicting less than a 6 pct improvement this year compared to 1983. That figure was then raised to 10 pct, then 15 pct—and unless the industry really flattens out in the last quarter, a 20 pct growth figure is not unrealistic.

"If shipments for the remaining months continue at a level comparable to last year's, the 1973 record of 35.8 million units will be shattered," said one industry executive.

In early summer, appliance sales were led by room air conditioners, dehumidifiers and microwave ovens. But as the summer progressed, declines in air conditioner and dehumidifier sales were more than offset by major pickups in all types of appliances with the exception of refrigerators, whose sales dipped slightly.

Despite a fast finish for the appliance industry in 1983, this year's sales figures should continue to hold up for several reasons. For one thing, despite recent drops in housing starts, the builder demand for appliances should remain strong through 1984. Though housing starts may be dropping, housing completions remain high.

For another, consumer spending continues apace despite slowly rising interest rates. Many major appliances, bought around the record appliance-purchasing year of 1973, are due for replacement. Consumers, with some extra cash in their pockets, are doing just that.

The major dark cloud over the industry is the threat of rising interest rates, which could curtail credit, reduce housing starts and sales, and slow consumer spending.

MATERIAL HANDLING—Material handling equipment manufacturers are reporting a mixture of good news, bad news and old news.

The good news is that much of the industry, including even industrial truck makers, is recovering.

The bad news is profit margins remain, as they typically have been, rather low in material handling. "This is particularly true when your talking about engineered product," explains one systems maker.

The old news is more good news so far. Material handling, except for trucks, is one U.S. industry that isn't being decimated by foreign producers.

The third quarter of this year is turning out to be a significant, if not terrific improvement over the second quarter and a remarkable improvement over the third quarter of 1983. The rest of the year "looks very good," says one industry analyst.

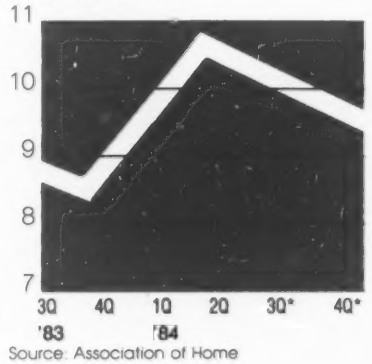
Others note that the recovery in general, or more particularly its length, is the best news the industry has had in years. "Slow, steady growth is what we feed on. Our customers buy these systems only when they perceive a time period that will allow the return. That time period is a matter of several years," says one company chairman.

According to the industry, the business world is coming to believe that this recovery is long-lasting enough to consider investing in Automatic Storage and Retrieval (AS/R) systems in a big way. Thus the great expectations of the material handling industry for the rest of this year and especially for 1985. Next year may be a $6 billion year for the industry. And, the last quarter of 1984 is almost definitely going to top the $1 billion level.

"What we make," says one top executive in the industry, "is a necessity for the rest of the industry. But, it only sells when the rest of business sees extended prosperity. We believe they're seeing it now."

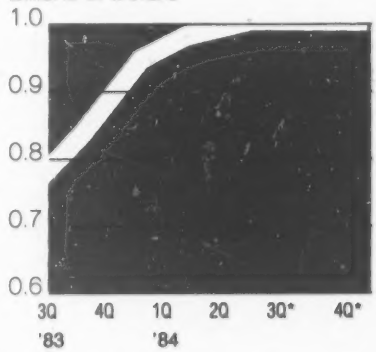
Total major appliance units shipped are running some 30 pct above the 1983 pace.

Appliances, Shipments



Source: Association of Home Appliance Manufacturers
*IA estimate

Materials Handling, Shipments



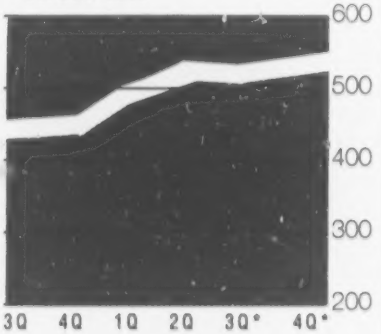
Source: Material Handling Institute
*IA estimate

WELDING; HEAT TREATING

One observer of the welding industry . . . sees a strong finish to the year.

Welding, Shipments

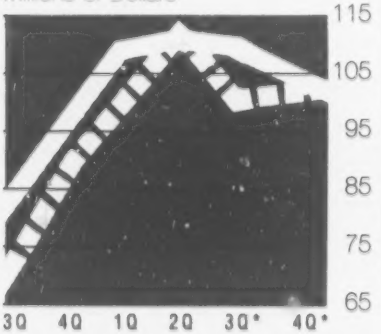
Index: 100 = $200 million in distributor sales



Source: National Welding Supply Assn.
*IA estimate

Heat Treatment

Millions of Dollars



Source: Industrial Heating Equipment Assn., Metal Treating Institute
*IA estimate

Sales of Commercial Heat Treaters
Heat Processing Equipment Orders

WELDING—The second quarter of 1984 was the best quarter ever in terms of distributor sales, according to the National Welding Supply Association (NWSA). To some, this could be misleading because the domestic manufacturers of welding equipment and consumables have been hurting.

The explanation is obvious. There are many more foreign producers vying for the U.S. welding market.

According to the NWSA statistics, this year's second quarter was 21.3 pct better than the same period last year and about 30 pct ahead of 1982.

Although no record-breaker, the third quarter was not bad.

One observer of the welding industry said that the industry "is stopping to catch its breath after its big surge in May." He looks for the vigor to reassert itself during the third quarter and sees a strong finish to the year.

The aforementioned "big surge in May" was a welding supply index figure of 181.6. All told, the NWSA index figures are running well ahead of any other year. Both equipment and consumables are also well ahead of 1983.

A distributor in the Southwest said: "We had the best July in the 35-year history of our company."

Another distributor executive in the East observed a willingness to spend money for capital equipment and a pick-up in customer orders to meet increased demand.

"We are finding extremely competitive conditions in the industry and more acceleration than in three years," he said. "However, sales are at a pace we can live with."

One very bright market for welding is in the nuclear business. This is quite contrary to what one might expect, but the strength of nuclear is in weld repair. Navy shipbuilding is another plus.

Throughout industry in general, there has been a noticeable increase in gas-shielded and self-shielded semiautomatic welding.

HEAT TREATING—Heat treating is holding with real strength. Several heat treating plants saw no seasonal slowdown in July—though most usually do—and continued through August at about the clip they enjoyed during July.

Some shops are reporting a backlog decline since July. And it appears that the jam-up in heat treating deliveries in May and June had begun to sort itself out by the end of June. Deliveries were getting more predictable during July, even during the plant vacation period.

So it may be that the fourth quarter forecast for heat treating, based on data collected by the Metal Treating Institute, is on the low side. It suggests a decline in the fourth quarter by about 4 pct. In 1983, the fourth quarter was 11 pct over the third quarter.

The totals reported by heat treaters through June and July are impressive. Although 1982 and 1983 were bad years, by comparison with past highs, it's not uncommon to find heat treaters who had a cumulative new order total through July that was 60 pct or even 70 pct over the year ago period.

The first quarter results obtained by the MTI from its members are a wider sample, but even this was up more than 36 pct over the 1983 period. The second quarter of 1984 was at least 20 pct over the year ago period. Heat treating equipment sales, on the basis of data reported by Industrial Heating Equipment Association, scored an even higher year-to-year gain in first half.

Any real softening in heat treat and heat treat equipment markets is still to come. A possible auto strike and cutbacks by some heavy equipment industries are bound to have an effect. Interestingly, one source notes that precision gear heat treat work is still rising, after failing to get started until as late as the June-July 1984 period.

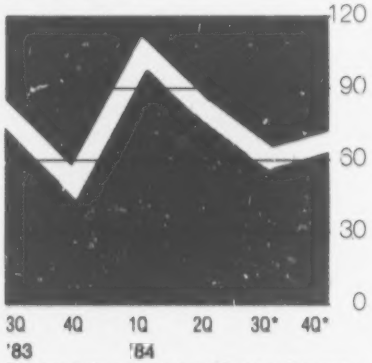
Still, heat treating equipment orders should rise in the fourth quarter, after the hot business levels in many heat treating shops during the summer.

AIRCRAFT; ENGINES & TURBINES

(Aircraft) orders for 1984 have surpassed the depressed level of 1983.

Commercial Airplane, Orders

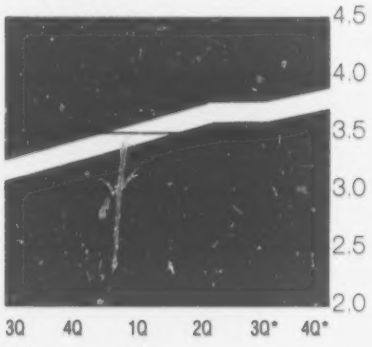
No. of Planes



Source: Airbus, Boeing, McDonnell-Douglas
*IA estimate

Engines and Turbines, Shipments

Billions of Dollars



Source: Dept. of Commerce
*IA estimate

AIRCRAFT—The major airframe manufacturers continue their slow but steady climb out of the recession that has plagued the industry for more than two years. Orders for new aircraft were dramatically higher during the first half of 1984 than they were a year ago. Most industry officials are looking for this order surge to abate in the third and fourth quarters. Even so, new orders for 1984 have surpassed the severely depressed level of 1983.

Restored profitability for airline companies operating both in the United States and overseas is being cited as the single most important factor working to bolster the industry. Lower fuel prices also are helping the airline firms climb out of the recessionary spiral and update their fleets with new orders for more fuel-efficient aircraft.

Nevertheless, despite projected growth in passenger traffic for the third and fourth quarter, airframe industry officials remain cautious.

There continues to be excess capacity, especially in the wide-body jetliner portion of the market. Airframe manufacturers also face substantial price pressures, which are resulting in unique financing arrangements and the trade-in of older airplanes.

For example, Seattle-based Boeing Commercial Aircraft Co. announced in mid-August that Saudia, the national airline of Saudi Arabia, had ordered 10 747-300 airliners, a deal valued at about $1 billion. But Boeing agreed to be paid for the aircraft in a quantity of oil equal in value—at the official Saudia government price—to the purchase price of the airplanes.

Such barter arrangements are relatively unique to the industry. But they underscore the lengths to which airframe manufacturers must go to successfully conclude sales of new craft. Although the market has been improving for more than a year, it is likely such pressures will remain a reality through the remainder of 1984.

ENGINES—Shipments in this wide-ranging market have held steady or slightly improved during the past few quarters, a trend that should continue into the third quarter and through the remainder of the year.

Some improvement has been noticed in selected segments of the industry. Diesel engine makers report slightly increased activity in engine sales as a result of leveling interest rates and an improving stock market. But the long-term confidence level remains uncertain. Many customers are holding back until they are convinced the generally positive economic trends will hold up through the fourth quarter and after the upcoming national elections.

The oil segment of the industry remains sluggish. The hydropower end of the market is being affected by imports. Construction equipment has shown some improvement, but the uncertainty surrounding future interest rates makes any prediction of a substantial recovery in that segment dubious.

As for giant turbine generator sets, these continue to suffer as utility companies scale back earlier plans for expansion. The continuing controversy over nuclear energy—and the well-publicized problems facing several nuclear plants that have either recently opened or are soon scheduled to do so—have served to further drag down this market.

Many industry officials and analysts expect a rebound of sorts to take hold. But it is unlikely to occur in the second half of 1984. A move to substantial orders for new engines and turbines probably would not be felt until some time in 1985. Short-term predictions continue to remain cautious, as they have through most of the year.

The well-publicized general economic recovery will have to be sustained for a long period before the results translate into new orders for expensive, long-term products like large diesel engines and power plants.

SCREW MACHINE PRODUCTS; FASTENERS

SCREW MACHINE PRODUCTS—The screw machine products industry, which has seen significant growth through the first six months of 1984, slowed its expansion in the third quarter and may see a slight dip in orders in the fourth quarter. Even so, the industry should be up 25 pct and possibly 30 pct over 1983 by year end.

To a large extent the varied fortunes of screw machine product makers reflect the condition of U.S. industry as a whole. Screw machine product manufacturers who supply products to the high-flying automotive or appliance industries have done well, while producers serving the depressed farm equipment manufacturers or commercial aircraft companies have done poorly.

However, since more than 40 pct of screw machine product sales go to household appliance manufacturers (7 pct) and automakers (34 pct), the industry has experienced, for the most part, a good year.

The sales of screw machine products began leveling out in the third quarter and should see a slight drop in the fourth quarter, primarily because industries served by screw machine products industry are predicting similar growth curves. The automotive industry, while remaining healthy, is slowing its growth. Fourth quarter car production is expected to match third quarter totals, although by year's end, sales should be 23 pct above a year ago.

"Generally speaking, all our consumer industries are doing quite well except for aerospace and farm and construction equipment sectors," said an industry spokesman.

As for 1985, at least for the first six months, industry members see operations continuing on the same plateau that reached in the third and fourth quarter of 1984.

So while next year will probably see few dramatic upswings, business should, as one industry source said, "be very good to live with."

FASTENERS—Mechanical fastener manufacturers are reporting continued increases in business almost across their market board. Unfortunately, imports are picking up an ever-increasing share of those increases, industry observers report.

Overseas supplies of nuts and bolts in the "standards" end of the U.S. market are becoming so powerful that some in the American industry are predicting a consolidation of the remaining domestic makers in the "specials" end of the business. In effect, the U.S. mechanical fastener industry may be soon in complete forced retreat from the standard fastener market in its own country.

"We cannot compete on price with Japan and numerous other countries. It's impossible," says one company president.

Adds another, "There is no part of American industry anymore that says buy American when it comes to our product. It's strictly price."

So while the recovery may indeed be lifting all boats, it's lifting the foreign fleet to the disadvantage of U.S. fastener makers. "The recovery means there's a big increase in demand for fasteners. Unfortunately, people are opting for cheap stuff from overseas. It's that simple," says an industry expert.

Yet, all is not bleak in the industry. Those companies that have already largely left the "standards" end of the business and are in "specials" or engineered fasteners are reporting a real recovery of their own with sales levels 10 to 20 pct above last year.

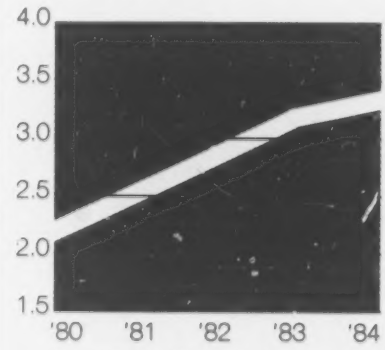
While their is still some hope that Washington will act to save the besieged U.S. "standards" industry, that hope is fast fading. A bill on downstream dumping recently passed the House. The Senate's action on this same bill would shore up the U.S. fastener industry, or what remains of it.

Meanwhile it's becoming a consensus in the remaining companies: get into specials or get out.

Sales of screw machine products should see a slight drop in the fourth quarter.

Screw Machine Products, Shipments

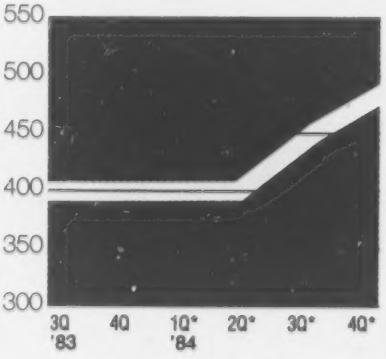
Billions of Dollars



Source: Dept. of Commerce
*IA estimate

Fasteners, Sales

Millions of Dollars

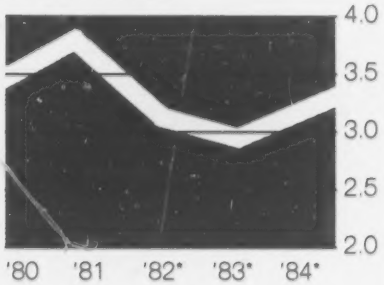


Source: SPI Committee on Resin
*IA estimate

BEARINGS; STAMPINGS

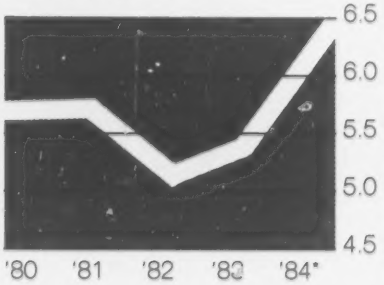
(The bearings) industry's sales could grow 14 pct by year end.

Ball and Roller Bearings Shipments
Billions of Dollars



Source: Dept. of Commerce
*IA estimate

Stampings, Shipments
Millions of Dollars



Based on the average of a control group whose shipments total more than $500 million annually.
Source: American Metal Stamping Assn.
*IA estimate

BEARINGS—The anti-friction bearing industry continues to bound up and down, although for the first three quarters of 1984 the ups predominated.

Industry sales could grow 14 pct by year end. This figure is several points higher than predicted earlier in the year because of the unexpected continuing strength of auto and truck sales.

Business should ease a bit in the fourth quarter as the automobile industry, the biggest purchaser of bearings, finds its growth curve leveling. Car sales in the fourth quarter should be no higher than the third.

Since the automotive industry accounts for approximately one-third of bearing manufacturer's sales, the nearly 25 pct growth of the auto industry in 1984 has pulled up many bearing producers. However, a number of industries continue to weigh the industry down. Sales to farm equipment and commercial aircraft manufacturers remains in the doldrums. Sales to construction equipment companies, railroad equipment makers, the oil field market, and to makers of industrial machinery has not been much better.

While bearing sales are improved over last year, the industry has too many millstones around its neck to have a banner 1984. Any slowdown in auto output could hurt the industry.

Expenditures for capital equipment have risen about 13 pct this year. However, since capital spending was cut back so severely during the past recession, the growth (as a pct of GNP) now taking place continues below pre-recession levels. Limited spending on new machinery means that manufacturers are still maintaining old equipment, equipment in need of bearings.

The bearing replacement market, up from the first half of the year, should remain strong through the fourth quarter. With the expected pickup in capital equipment purchases next year, the replacement market should gradually weaken in 1985.

STAMPINGS—The economic recovery may be slowing, but it doesn't seem to be choking stamping industry confidence about the near future.

Industry executives look forward to a prosperous last quarter of 1984 and a healthy 1985.

Much of their optimism is based on ongoing consumer spending spree, particularly in new car sales.

Effects of a GM strike? "It could dent the GNP slightly," said one Midwestern stamper, "and maybe weaken the dollar and even lower interest rates a bit if it would go on too long. I don't believe it will. I don't think it will have much impact at all."

Figures from the American Metal Stamping Assn. buttress individual stamper's confidence.

July stamping shipments did fall prey to the usual summer slump, but order bookings for the month were 5 pct ahead of June's level and 30 pct ahead of July 1983. This put July 1984 year-to-date orders 27 pct over those of the same period in 1983.

The AMSA report also indicated that stamping industry backlog remained strong in July, reflecting shorter lead-time periods.

Despite some consumer buying slowdowns, replacement appliances—refrigerators, washers, dryers, stoves and microwave ovens—are continuing to move out of the stores. But the market for appliances for new housing is off because of the drop in construction, particularly single-family dwellings.

Meanwhile, one Western stamping contact told *Iron Age* that he has been supplied with some defense contracts for aircraft in the second half of this year, and he is expecting a few orders from the commercial aircraft sector next year.

Nevertheless, he won't characterize the aerospace business as booming.

Thus, with the traditional surge in this quarter, one industry executive sizes up 1984 as an excellent year.

GEARS; VALVES

GEARS—Although the economic recovery has shifted into a more controlled pace now, an Eastern gear industry source says he's "feeling good" about the last quarter of this year and confident that growth will continue in 1985.

Overall, gearmakers sounded upbeat. As one told *Iron Age*, there is continuing good news out of Detroit, in spite of a possible GM strike. Also, sales of most appliance lines are holding at the third quarter level or even higher and gear manufacturers are benefiting from some recent aircraft orders.

The farm equipment market is a mixed bag. Some gearmakers see it as improving in 1985, others are sticking to their earlier doubts.

Although the farmers have been suffering so long from financial woes along with major weather disasters in many parts of the country, President Reagan's recent announcement of the resumption of wheat sales to Russia will undoubtedly put some U.S. farmers into a more equipment-buying mood. This probably won't be showing up as new orders until the first or second quarter of 1985.

Orders for machine tools could finish between 12 and 20 pct ahead of last year, one gear manufacturer felt.

Despite upward movement in orders for the last 15 months, profits for that industry are considered pretty dismal by the gear industry. As one gearmaker said, "They (machine tool orders) may be moving uphill, but it's like dragging a tire chain."

By product line, orders continue to be strongest now for precision and commercial-type gears for such consumer applications as vehicles, household appliances, pumps and agricultural markets; orders for larger types are still lagging, probably because of interest rates.

At the beginning of this year, U.S. gearmakers told *Iron Age* they were anxious to beat the 1983 blues. They certainly seem to be.

VALVES—The commercial construction industry may be having a field day lately and the chemical industry is expected to end 1984 some 13 pct ahead of last year, but it takes more than that to make this last quarter a hearty feast for valve makers.

According to valve industry forecasters, the industry will probably finish 7 pct ahead of last year while there could be a 9 pct increase for all of manufacturing.

The valve industry's predictions for 1984 and into 1985 are largely contingent on the capital spending of three prime end-users—petroleum, public utilities and chemical industries—which account for about two-thirds of their total sales.

On the plus side, the industry expects to see more demand for valves from the commercial building sector. Recent economic reports have shown that in July nonresidential building had risen some 29 pct over that of July 1983, while new plant expansions for this year could finish some 14 pct ahead of last.

There is a glut of office space, one report noted, and yet office buildings continue to mushroom, along with shopping centers and and large apartment complexes.

Although the chemical industry is expected to remain strong through next year, the petroleum industry is lagging. If some of the industry's excess capacity is absorbed, 1985 could see the petroleum industry boost its spending, resulting in more valve orders.

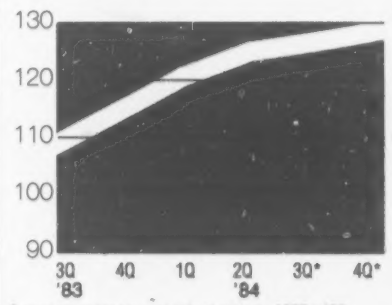
Meanwhile, the utilities seem to be winding down their capital spending.

Interpreted by one industry analyst, this would mean it will spend 5 pct through 1984 and no more than 3 pct next year.

In good times the valve industry may not be as strong as other industries. Conversely, it usually doesn't suffer as much as some others do in bad times. It stays a more even course.

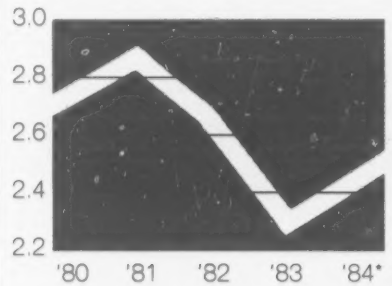
Orders continue to be strongest now for precision and commercial-type gears.

Gears, Bookings



Based on average monthly bookings. 1977 = 100
Source: American Gear Manufacturers Assn.
*IA estimate

Valves, Shipments
Billions of Dollars

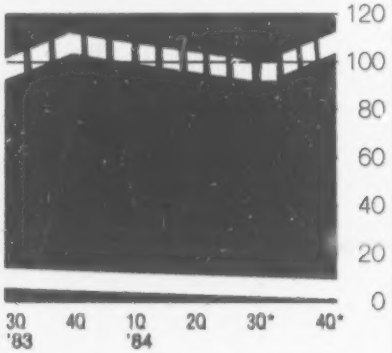


Source: Valve Manufacturers Assn.
*IA estimate

SHIPBUILDING; RAIL CARS

Construction may begin on 16 to 20 new Navy ships during the fourth quarter.

Shipbuilding
Commercial and Navy



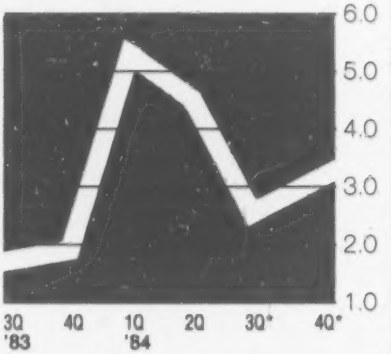
Source: Shipbuilders Council of America

Note: Commercial listing includes all commercial ships on order or under construction, 1,000 gross tons or over. Navy listing includes new construction of U.S. Navy ships, including Coast Guard cutters.

*IA estimate

Commercial
Navy

Rail Car Orders
Thousands of Units



Source: American Railway Car Institute
*IA estimate

SHIPBUILDING—For all intents and purposes, the domestic construction of large ships is just about dead. As of Aug. 1, three commercial ships over 1,000 gross tons were being built in U.S. yards. By the end of the year, there will only be one such ship under construction in an American shipyard.

American ship owners are buying large commercial ships, but they are all being built in overseas' yards.

The construction of ships for the U.S. Navy is a different matter entirely. During the first quarter of 1984, 107 ships (including 11 Coast Guard cutters) were under construction. Second quarter Navy construction dropped to 100 ships and the third quarter dropped to about 95 vessels.

Shipyards have been keenly awaiting the fiscal year 1985 program which began today. It's anticipated that construction may begin on 16 to 20 new Navy ships during the fourth quarter as a result of the program. This could bring Naval construction up to 110 during the fourth quarter.

Under the new budget, $3.1 billion has been budgeted for the construction of three new CG-47 AEGIS cruisers. Another $1.1 billion has been earmarked for the Navy's first DDG-51 guided-missile destroyer of the Arleigh Burke class. The latter ship has been critically sought by the Navy. Contracts have not been awarded yet on either the CG-47 cruisers or the guided-missile destroyer.

The Electric Boat Division of General Dynamics Corp. and Newport News Shipbuilding & Dry Dock Co. are bidding on two new submarine contracts. One is a $1.7 billion contract for a new Trident submarine. The other is a $2.8 billion contract for four new SSN-688 attack submarines.

The big item in Naval ship conversion is the $422 million budgeted for the battleship, the USS Missouri. This work will be done at the Long Beach Naval Shipyard in California.

RAIL CARS—The topsy-turvy rail car industry continues to maintain its usual form. Just when the industry was trying to adjust to order clips of less than 1,000 cars per month, along came June. Orders jumped to 2,994, but dropped back to 934 in July.

Business is running well ahead of 1983, but it's still only a shadow of those 100,000 car years, last experienced in 1980. With luck, 1984 might be a 20,000 car year, as far as orders are concerned.

The second quarter this year showed a 10 pct decrease from a relatively strong first quarter. Although the final figures were not yet available, the third quarter appeared to be a severe—perhaps as much as 50 pct—drop in orders from the second quarter. The fourth quarter is expected to be a slight improvement over the third quarter but not as strong as the first two quarters.

According to the American Railway Car Institute, Chicago, 1,327 new freight cars were placed in service in July, compared with 1,771 in June and 289 in July 1983. As of Aug. 1, the backlog of cars on order but undelivered was 6,821 cars, compared with 7,267 on July 1, and 3,968 on Aug. 1, 1983. Average monthly backlog as of Aug. 21 was 6,525, compared with 4,310 at the same time last year.

Meanwhile, the Association of American Railroads (AAR), Washington, reported that 93 locomotives were placed in service in July, compared with 60 in June and 11 in July 1983.

In other new construction news, Conrail reportedly plans to build 250 gondolas in its own yards.

Nevertheless, despite the apparent glut of rail cars, freight traffic during the week ended Aug. 11 totaled an estimated 18 billion ton-miles, 9 pct above the corresponding week a year ago. □

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PRICE & PRODUCTION DATA

(Effective September 17, 1984)

Steel production by districts, thousands of tons (000 omitted)

	Last Week	Two Weeks Ago	Month Ago	Year Ago
North East Coast	159	181	183	176
Pittsburgh	197	187	222	180
Youngstown	97	73	82	93
Lake Erie	159	160	124	145
Detroit	120	143	161	84
Chicago	358	355	427	484
Cincinnati	85	89	83	100
St. Louis	74	50	71	73
Southern	166	161	175	150
Western	73	74	67	96
U.S. Production	1,488	1,473	1,595	1,613

Source: American Iron & Steel Institute

Lake Superior Ore Prices

51.50% Fe Natural delivered lower Lake ports. Rail transportation, handling and unloading may be charged to the account of the buyer. Coarse ore 80¢ premium.

Pellets (per iron unit natural).....gross-ton 80.50-86.9*
Mesabi, regular-unscreened .....gross-ton $32.53
Mesabi, non-bessemer.....gross-ton $30.03-31.53**

*80.50¢—Pickands Mather as of 1/27/81.
86.9¢—U. S. Steel as of 3/15/82. Cleveland-Cliffs as of 2/26/82, Oglebay Norton as of 3/25/82, and Hanna Mining as of 2/26/82.
**Effective 8/1/83.

STEEL PRODUCTION, COMPOSITE PRICES

(Effective September 17, 1984)

U.S. Steel Production	Last Week	Two Weeks Ago	To Date 1984	To Date 1983
Net tons, in thousands	1,488	1,473	68,873	57,440
Capability Utilization Rate	57.7	57.1	71.9	53.7

Composite Prices	This Week	Week Ago	Month Ago	Year Ago
Finished Steel Base* (¢/lb.—eff. 7/1/84)	27.582	27.582	27.582	26.822
Pig Iron* * (Net ton=2000 lbs.)	$213.00	$213.00	$213.00	$213.00
Scrap No. 1 hvy.* * * (Gross ton=2240 lbs.)	$ 85.17	$ 85.17	$ 82.50	$ 77.17
No. 2 bundles	$ 51.50	$ 52.17	$ 51.50	$ 45.50

Scrap Comparison (Gross Ton)

No. 1 steel, Pittsburgh..	$ 92.50	$ 92.50	$ 87.50	$ 82.50
No. 1 steel, Philadelphia ..	81.50	81.50	81.50	69.50
No. 1 steel, Chicago.....	81.50	81.50	78.50	79.50
No. 1 bundles, Detroit.....	77.50	77.50	70.50	75.50
Low Phos., Youngstown..	80.50	80.50	80.50	84.50
No. 1 mach'y cast., Pgh...	71.50	71.50	71.50	74.50
No. 1 mach'y cast., Phila .	98.50	98.50	98.50	95.50
No. 1 mach'y cast., Chi..	115.50	115.50	115.50	109.50

*Finished Steel Composite: Weighted index of steel bars, shapes, plates, wire, rails, black pipe, hot and cold rolled sheets and strips.
* *Pig Iron Composite: Based on average prices for basic and foundry pig iron at representative producing points within the U.S.
* * *Steel Scrap Composite: Average of No. 1 hvy. melting steel scrap and No. 2 bundles delivered to consumers at Pittsburgh, Philadelphia and Chicago.

NONFERROUS PRICES

(Effective September 17, 1984) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated

Primary Metal Prices

(cents per lb.)	current price	last price	date of change
Aluminum (LME)	46.00	46.68	9/17/84
Copper (C)	62.00-66.00	63.50-66.00	9/14/84
Lead	24.00-28.00	26.00-28.00	9/10/84
Magnesium Ingot	148.00	143.00	5/25/84
Nickel (LME)	213.27	213.05	9/17/84
Titanium Sponge	555.00-565.00	555.00	4/29/82
Zinc	48.00	48.00-50.00	8/24/84

ALUMINUM: Avg. for last week & previous week. COPPER (C) = cathode. LEAD: common grade. MAGNESIUM: 99.8% pig, delivered. NICKEL: Avg. for last week & previous week. Canada. ZINC: high grade.

Antimony, American Laredo, Texas	$2.00
Beryllium-aluminum 5% Be, per lb. contained Be	$230.00
Beryllium-copper, per lb. cont. Be	$140.00
Beryllium 97% powder 200	$178.00
Cadmium, ton lots	$1.55
Calcium, ton lots, crown	$3.58
Chromium, 99.8%	$3.75
Cobalt, 99%, cathode	$12.50
Gold per troy oz.	$335.25
Indium, dollars per troy oz.	$3.30
Iridium, dollars per troy oz.	$500
Magnesium sticks, 10,000 lbs.	$1.97
Mercury, per 76-lb. f.o.b. N.Y.	$315-$320
Molybdenum, lb. tech. moly oxides, 20 lb. MO can	$6.85
Nickel electro (PDCR)	$3.29
Palladium, per troy oz.	$138
Platinum, per troy oz.	$329
Rhodium, per troy oz.	$700
Silver ingots, per troy oz.	$7.02
Vanadium	$6.00
Zirconium sponge	$12.00-$17.00

(Per lb. unless otherwise noted)

Straits Tin Price

(U.S. cents per lb, EX-SMELTER, based on daily market in Penang in Malaysian dollars per kilo.)

Sept. 10—563.93 Sept. 13—562.88
Sept. 11—563.27 Sept. 14—562.88
Sept. 12—563.40

Scrap Prices
Brass Mill Scrap

(Cents per lb; over 20,000 lbs. add 1¢ per lb)

	Solids	Turning
Copper	60½	59½
Yellow brass	56⅜	55¼
Red brass	57⅜	56½
Comm. bronze	57¾	57
Mang. bronze	59¼	51¼
Free cutting rod ends	57	56

Custom Smelters Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	54
No. 2 copper wire	45
Light copper	36

Ingot Makers Scrap

(Cents per lb., carload lots, del. refinery)

No. 1 copper wire	50
No. 2 copper wire	41
Light copper	32
No. 1 composition	53
No. 1 comp. turnings	51
Hvy. yellow brass solids	36
Hvy. yellow brass turnings	34
Radiators	40

Aluminum

New mixed clips	34	—35
Old sheet	31	—32
Old cast	31	—32
Clean dry borings	32	—33

Dealers' Scrap

(Dealers' buying price f.o.b. New York in cents per pound)

Aluminum

Segregated clippings	33	—34
Mixed L.C. clips	28	—29
Old sheets and cast	25	—26
Borings and turnings	20	—21
Duraluminum clippings	26	—27

Copper and Brass

No. 1 copper wire	45	—46
No. 2 copper wire	37	—38
Light copper	33	—34
Radiators	32	—33
No. 1 composition	41	—42
No. 1 composition turn'gs	38	—39
Cocks and faucets	30	—31
Clean heavy yellow brass	29	—30
Brass Pipe	30	—31
New soft brass clippings	42	—43

Lead

Heavy soft lead	10	—11
Whole batteries	3	— 4
Type metal	16	—17
Electrotype	13	—14

Nickel

Nickel solids	120	—130
Nickel rod ends	120	—130
Nickel sheets, clips	120	—130
Nickel turnings	50	— 60

Zinc

New zinc clippings	18	— 19
Old diecast zinc	14	— 15

EFFECTIVE SEP. 17, 1984

(Effective September 17, 1984) Prices obtained in trade based on representative tonnages per gross ton delivered to consumer unless otherwise stated. Prices are the opinions of *Iron Age* editors and correspondents, based on contacts with dealers, brokers, generators and users in the industry on the effective date listed above.

Ferrous Scrap Prices

Pittsburgh

No. 1 hvy. melting	$ 92.00 to $ 93.00
No. 2 hvy. melting	82.00 to 83.00
No. 1 dealer bundles	106.00 to 107.00
No. 1 factory bundles (auto)	95.00 to 96.00
No. 2 bundles	53.00 to 54.00
No. 1 busheling	109.00 to 110.00
Machine shop turn	12.00 to 13.00
Shoveling turnings	51.00 to 52.00
Cast iron borings	49.00 to 50.00
Low phos. punchings plate	109.00 to 110.00
Heavy turnings	80.00 to 81.00
No. 1 RR hvy. melting	100.00 to 101.00
Rails 2 ft. and under	115.00 to 116.00
Scrap rails, random lgth	101.00 to 102.00
RR specialties	107.00 to 108.00
No. 1 machinery cast	71.00 to 72.00
Cupola cast	64.00 to 65.00
Heavy breakable cast	30.00 to 31.00
Stainless	
18-8 bundles and solids	550.00 to 560.00
18-8 turnings	450.00 to 460.00

Chicago

No. 1 hvy. melting	$ 81.00 to $ 82.00
No. 2 hvy. melting	74.00 to 75.00
No. 1 dealer bundles	99.00 to 100.00
No. 1 factory bundles (auto)	97.00 to 98.00
No. 2 dealer bundles	51.00 to 52.00
No. 1 busheling	100.00 to 101.00
Shredder scrap	97.00 to 98.00
Machine shop turn	44.00 to 45.00
Mixed bor. and turn	46.00 to 47.00
Shoveling turnings	50.00 to 51.00
Cast iron borings	47.00 to 48.00
Low phos. forge crop	115.00 to 116.00
Low phos. punchings plate ¼ in. and heavier	125.00 to 126.00
Low phos. 2 ft. and under	120.00 to 121.00
No. 1 RR hvy. melting	97.00 to 98.00
Scrap rails, random lgth	99.00 to 100.00
Reroller rails	110.00 to 111.00
Rails, 2 ft. and under	119.00 to 120.00
RR couplers and knuckles	101.00 to 102.00
RR car axles	133.00 to 134.00
No. 1 machinery cast	115.00 to 116.00
Cupola cast	102.00 to 103.00
Stove plate	99.00 to 100.00
Steel car wheels	111.00 to 112.00
Stainless	
18-8 bundles and solids	490.00 to 500.00
18-8 turnings	420.00 to 430.00
430 bundles and solids	120.00 to 125.00
430 turnings	80.00 to 90.00

Philadelphia

No. 1 hvy. melting	$ 80.00 to $ 83.00
No. 2 hvy. melting	71.00 to 74.00
No. 1 dealer bundles	95.00 to 98.00
No. 2 dealer bundles	48.00 to 51.00
No. 1 busheling	95.00 to 98.00
Shredder scrap	100.00 to 103.00
Machine shop turn	29.00 to 32.00
Mixed bor. and turn	29.00 to 32.00
Shoveling turnings	40.00 to 43.00
Low phos. 5 ft. and under	95.00 to 98.00
Low phos. 2 ft. punchings	116.00 to 119.00
Electric furnace bundles	101.00 to 104.00
RR specialties	98.00 to 101.00
Rails, 2 ft. and under	118.00 to 121.00
Cupola cast	75.00 to 78.00
Heavy breakable cast	57.00 to 60.00
No. 1 machinery cast	97.00 to 100.00

Detroit

Broker buying prices per gross ton on cars:

No. 1 hvy. melting	$ 59.00 to $ 60.00
No. 2 hvy. melting	58.00 to 59.00
No. 1 dealer bundles	77.00 to 78.00
No. 2 bundles	39.00 to 40.00
No. 1 busheling	76.00 to 77.00
Drop forge flashings	49.00 to 50.00
Machine shop turn	47.00 to 48.00
Mixed borings and turn	26.00 to 27.00
Shoveling turnings	48.00 to 49.00
Cast iron borings	37.00 to 38.00
Heavy breakable cast	40.00 to 41.00
Mixed cupola cast	56.00 to 57.00
Automobile cast	80.00 to 81.00
Stainless	
18-8 bundles and solids	455.00 to 465.00
18-8 turnings	360.00 to 370.00
430 bundles and solids	110.00 to 120.00

Youngstown

No. 1 hvy. melting	$ 66.00 to $ 69.00
No. 2 hvy. melting	47.00 to 50.00
No. 1 dealer bundles	79.00 to 82.00
No. 2 dealer bundles	35.00 to 38.00
Machine shop turn	13.00 to 16.00
Shoveling turnings	18.00 to 21.00
Low phos. plate	79.00 to 82.00
Electric furnace bundles	76.00 to 79.00
Galvanized bundles	67.00 to 70.00

Cleveland

No. 1 hvy. melting	$ 60.00 to $ 63.00
No. 2 hvy. melting	37.00 to 40.00
No. 1 dealer bundles	73.00 to 76.00
No. 1 factory bundles	77.00 to 80.00
No. 2 bundles	19.00 to 22.00
No. 1 busheling	78.00 to 81.00
Machine shop turn	8.00 to 11.00
Mixed bor. and turn	8.00 to 11.00
Shoveling turnings	10.00 to 13.00
Cast iron borings	13.00 to 16.00
Cut structural & plates, 2 ft. and under	110.00 to 113.00
Low phos. punchings plate	110.00 to 113.00
Drop forge flashings	42.00 to 45.00
Foundry steel, 2 ft. & under	62.00 to 65.00
No. 1 RR hvy melting	79.00 to 82.00
Rails, 2 ft. and under	115.00 to 118.00
Rails, 18 in. and under	115.00 to 118.00
Steel axle turnings	59.00 to 62.00
Railroad cast	92.00 to 95.00
No. 1 machinery cast	102.00 to 105.00
Cupola cast	58.00 to 61.00
Stove plate	44.00 to 47.00
Stainless	
18-8 bundles	375.00 to 385.00
18-8 turnings	325.00 to 335.00
430 bundles	80.00 to 85.00

Buffalo

Broker buying prices per gross ton on cars:

No. 1 hvy. melting	$ 67.00 to $ 68.00
No. 2 hvy. melting	56.00 to 57.00
No. 1 busheling	82.00 to 83.00
No. 1 dealer bundles	81.00 to 82.00
No. 2 bundles	37.00 to 38.00
Machine shop turn	14.00 to 15.00
Mixed bor. and turn	13.00 to 14.00
Shoveling turnings	17.00 to 18.00
Cast iron borings	22.00 to 23.00
Low phos. plate	97.00 to 98.00
Structural and plate, 2 ft. and under	100.00 to 101.00
Rails, 2 ft. and under	100.00 to 101.00
Scrap rails, random lgth	76.00 to 77.00
No. 1 machinery cast	81.00 to 82.00
No. 1 cupola cast	61.00 to 62.00

St. Louis

No. 1 hvy. melting	$ 70.00 to $ 71.00
No. 2 hvy. melting	59.00 to 60.00
Foundry steel, 2 ft.	70.00 to 71.00
No. 1 dealer bundles	70.00 to 71.00
No. 2 bundles	54.00 to 55.00
Machine shop turn	17.00 to 18.00
Shoveling turnings	23.00 to 24.00
Cast iron borings	27.00 to 28.00
No. 1 RR hvy. melting	70.00 to 71.00
Rails, random length	72.00 to 73.00
Rails, 18 in. and under	93.00 to 94.00
RR specialties	87.00 to 88.00
Cupola cast	72.00 to 73.00
Heavy breakable cast	50.00 to 51.00
Stove plate	83.00 to 84.00
Steel car wheels	101.00 to 102.00
Rerolling rails	80.00 to 81.00
Unstripped motor blocks	61.00 to 62.00

Birmingham

No. 1 heavy melting	$ 75.00 to $ 76.00
No. 2 heavy melting	67.00 to 68.00
No. 1 dealer bundles	75.00 to 76.00
No. 2 bundles	52.00 to 53.00
No. 1 busheling	75.00 to 76.00
Shredder scrap	97.00 to 98.00
Machine shop. turn.	29.00 to 30.00
Shoveling turnings	43.00 to 44.00
Cast iron borings	43.00 to 44.00
Electric furnace bundles	67.00 to 68.00
Elec. furnace, 3 ft. & under	73.00 to 74.00
Structural and plate, 2 ft.	105.00 to 106.00
Structural and plate, 4 ft.	94.00 to 95.00
No. 1 RR hvy. melting	94.00 to 95.00
Scrap rails, random lgth.	90.00 to 91.00
Rails, 2 ft. and under	108.00 to 110.00
Angles and splice bars	92.00 to 93.00
No. 1 cupola cast	87.00 to 88.00
Unstripped motor blocks	69.00 to 70.00

Cincinnati

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 61.00 to $ 62.00
No. 2 hvy. melting	58.00 to 59.00
No. 1 dealer bundles	75.00 to 76.00
No. 2 bundles	34.00 to 35.00
Machine shop turn	6.00 to 7.00
Shoveling turnings	8.00 to 9.00
Cast iron borings	21.00 to 22.00
Low phos. 18 in. and under	93.00 to 94.00
Rails, random length	75.00 to 76.00
Rails, 2 ft. and under	90.00 to 91.00
No. 1 cupola cast	63.00 to 64.00
Heavy breakable cast	29.00 to 30.00
Drop broken cast	82.00 to 83.00

New York

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 50.00 to $ 52.00
No. 2 hvy. melting	41.00 to 43.00
No. 2 dealer bundles	23.00 to 27.00
Mixed bor. and turn	11.00 to 13.00
Machine shop turn	6.00 to 7.00
Shoveling turnings	14.00 to 15.00
Clean cast. chem. borings	35.00 to 36.00
No. 1 machinery cast	89.00 to 90.00
Mixed yard cast	50.00 to 51.00
Heavy breakable cast	10.00 to 12.00
Stainless	
18-8 prepared solids	490.00 to 510.00
18-8 turnings	390.00 to 410.00
430 prepared solids	90.00 to 110.00
410 solids	80.00 to 90.00

Boston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 68.00 to $ 70.00
No. 2 hvy. melting	58.00 to 60.00
No. 1 dealer bundles	70.00 to 71.00
No. 2 bundles	41.00 to 43.00
No. 1 busheling	78.00 to 80.00
Shredder scrap	76.00 to 78.00
Machine shop turn	14.00 to 16.00
Shoveling turnings	22.00 to 24.00
No. 1 machinery cast	85.00 to 90.00
Mixed cupola cast	56.00 to 58.00
Heavy breakable cast	14.00 to 15.00

San Francisco

No. 1 hvy. melting	$ 47.00 to $ 49.00
No. 2 hvy. melting	41.00 to 43.00
No. 1 dealer bundles	37.00 to 39.00
No. 2 dealer bundles	19.00 to 21.00
Machine shop turn	6.00 to 8.00
Cast iron borings	6.00 to 8.00
No. 1 cupola cast	81.00 to 83.00

Los Angeles

No. 1 hvy. melting	$ 48.00 to $ 50.00
No. 2 hvy. melting	41.00 to 43.00
No. 1 dealer bundles	38.00 to 40.00
No. 2 dealer bundles	19.00 to 21.00
Machine shop turn	10.00 to 12.00
Shoveling turnings	8.00 to 10.00
Cast iron borings	6.00 to 8.00
Elec. furnace, 1 ft. and under (foundry)	77.00 to 79.00
No. 1 cupola cast	75.00 to 77.00

Seattle

No. 1 hvy. melting	$ 70.00 to $ 72.00
No. 2 hvy. melting	59.00 to 61.00
No. 2 bundles	41.00 to 43.00
No. 1 cupola cast	94.00 to 95.00
Mixed yard cast	84.00 to 86.00

Hamilton, Ont.

Brokers buying price per net ton on cars:

No. 1 heavy melting	$ 91.00
No. 2 heavy melting cut 2 ft. and under	85.00
No. 1 dealer bundles	92.00
No. 2 bundles	48.00
Mixed steel scrap	62.00
Bush. new fact. prep'd.	93.00
Bush. new fact. unprp'd.	83.00
Machine shop turn	41.00
Short steel turn	43.00
Mixed bor. and turn	30.00
Cast scrap	74.00

Houston

Brokers buying prices per gross ton on cars:

No. 1 hvy. melting	$ 76.00 to $ 77.00
No. 2 hvy. melting	61.00 to 62.00
No. 2 bundles	45.00 to 46.00
Machine shop turn	16.00 to 17.00
Crushed turnings	34.00 to 35.00
Shredder scrap	78.00 to 79.00
Cut structural plate, 2 ft. and under	105.00 to 107.00
Cut structural plate, 5 ft. and under	89.00 to 91.00
Unstripped motor blocks	60.00 to 61.00
Cupola cast	80.00 to 81.00

PRODUCER KEY
With Principal Offices

A4 American Cladmetals Co., Carnegie, Pa.
A7 Armco Inc., Middletown, Ohio
A8 Atlantic Steel Co., Atlanta, Ga.
A11 Atlantic Wire Co., Branford, Conn.

B1 Baron Drawn Steel Corp., Toledo, Ohio
B3 Bethlehem Steel Corp., Bethlehem, Pa.
B4 Blair Strip Steel Co., New Castle, Pa.
B5 Bliss & Laughlin Steel Co., Harvey, Ill.

C1 Calstrip Corp., Los Angeles
C6 CF&I Steel Corp., Pueblo, Colo.
C10 Copperweld Steel Co., Warren, Ohio
C11 Crucible Divisions, Colt Industries, Pittsburgh, Pa.
C15 G. O. Carlson, Inc., Thorndale, Pa.
C16 Connors Steel Co., Birmingham, Ala.
C20 Calumet Steel Div., Chicago Heights, Ill.
C21 Cumberland Steel Co., Cumberland, Md.

D1 Detroit Strip Div., Cyclops Corp.
D2 Driver Wilbur B., Co., Newark, N. J.
D3 Driver Harris Co., Harrison, N. J.

E3 Enamel Products & Plating Co., McKeesport, Pa.
E4 Elliot Bros. Steel Co., New Castle, Pa.

F1 Firth Sterling, Inc., McKeesport, Pa.

G2 Granite City Steel Co., Granite City, Ill.
G3 Great Lakes Steel Division, National Steel Corp., Ecorse, Mich.
G4 Greer Steel Co., Dover, O.
G5 Green River Steel Corp., Owensboro, Ky.
G6 Gibraltar Steel Corp., Buffalo, N. Y.
G7 Georgetown Steel Corp., Georgetown, S. C.
G8 Guterl Special Steel Corp.

H1 Hercules Drawn Steel Corp., Livonia, Mich.

I2 Ingersoll Steel Div., New Castle, Ind.
I3 Inland Steel Co., Chicago, Ill.
I4 Interlake Steel Corp., Chicago

J2 Jessop Steel Corp., Washington, Pa.
J3 Jones & Laughlin Steel Corp., Pittsburgh
J4 Joslyn Mfg. & Supply Co., Chicago
J5 Judson Steel Corp., Emeryville, Calif.

K2 Keystone Consolidated Industries, Inc.
K3 Kentucky Electric Steel Co., Ashland, Kentucky
K5 Kemco Div., Foote Mineral Co., Keokuk, Iowa

L2 La Salle Steel Co., Chicago
L3 Lone Star Steel Co., Dallas
L4 Lukens Steel Co., Coatesville, Pa.
L5 Litho-Strip Corp., Chicago

M2 McLouth Steel Products Corp.
M4 Mid States Steel & Wire Co., Crawfordsville, Ind.
M8 Mill Strip Products Div., National Steel Service Center, National Steel Corp.
M9 Moltrup Steel Products Co., Beaver Falls, Pa.
M11 Midwest Steel Div., National Steel Corp., Portage, Ind.

N1 Northeast Precision Steel Co., Boston, Mass.
N4 Northwestern Steel & Wire Co., Sterling, Ill.
N6 Northwest Steel Rolling Mills, Seattle, Wash.
N9 Nelsen Steel & Wire Co., Chicago, Ill.
N10 North Star Steel Co., Saint Paul, Minnesota

O2 Oregon Steel Mills, Portland, Ore.

P2 Phoenix Steel Corp., Claymont, Del.
P9 Pacific States Steel Co., Niles, Cal
P14 Pacific Tube Co., Los Angeles
P15 Philadelphia Steel and Wire Corp., Phila.

R3 Republic Steel Corp., Cleveland
R4 Ramco Steel Co., Buffalo, N. Y.
R5 Roblin Steel Corp., Inc., North Tonawanda, N. Y.
R6 Rodney Metals, Inc., New Bedford, Mass.
R7 Rome Strip Steel Co., Rome, N. Y.

S1 Sharon Steel Corp., Sharon, Pa.
S7 Stanley Works, New Britain, Conn.
S8 Superior Drawn Steel Co., Monaca, Pa.
S10 Seneca Steel Service, Buffalo, N. Y.
S16 Southern Precision Steel Co., Gulfport, Miss.

T4 Thomas Steel Strip Co., Warren, O.
T5 Timken Company, Steel Division, Canton, O.
T7 Texas Steel Co., Fort Worth, Tex.
T9 Triumph Electro Corp., Chicago, Ill.
T10 Tennessee Forging Steel Corp., Harriman, Tenn.
T11 Teledyne Columbia-Summerill, Carnegie, Pa.

U1 United States Steel Corp., Pittsburgh, Pa.

W3 Weirton Steel Corp., Weirton, West Va.
W5 Wheeling-Pittsburgh Steel Corp.
W7 Wilson Steel & Wire Co., Chicago
W10 Wyckoff Steel Div., Ampco-Pittsburgh Corp., Pittsburgh, Pa.
W14 Whittaker Steel Strip Div., Detroit, Mich.

STEEL SERVICE CENTER PRICES
Price, Dollars per 100 lb

Prices are based on list prices reported to *Iron Age* by a number of metal service centers deemed representative by *Iron Age* and then weighted based in part on the reports received each month. Prices are not intended to reflect the actual transaction prices obtained by any individual metal service center.

Cities* / City Delivery Charge*	Sheets			Strip	Plates	Shapes	Bars		Alloy Bars			
	Hot-Rolled (10 gage)	Cold-Rolled (20 gage)	Galvanized (16 gage)	Hot-Rolled Strip	Plates	Standard Structurals	Hot-Rolled (merchant)	Cold Finished	Hot-Rolled 8620 As Rolled	Hot-Rolled 4140 Annealed	Cold-Drawn 8620 As Rolled	Cold-Drawn 4140 Annealed
Atlanta	29.65	33.55	34.48	31.63	27.02	23.28	19.55	31.25	34.34	50.60	69.58	73.19
Baltimore	26.90	30.72	37.59	39.82	34.75	28.80	22.60	38.65	57.45	64.70	71.71	75.11
Birmingham	26.60	32.82	34.59	31.64	26.64	23.01	19.99	30.91	49.31	58.90	68.10	74.43
Boston	34.94	40.19	45.64	47.54	35.34	30.06	23.59	40.29	47.92	51.02	58.48	63.50
Buffalo	31.10	35.68	41.89	40.15	32.59	27.12	19.86	37.75	44.15	47.85	53.92	59.84
Chicago	29.26	34.62	37.84	31.09	24.46	21.09	17.70	33.57	42.86	42.94	47.38	52.75
Cincinnati	28.91	34.58	37.16	30.85	24.84	20.75	17.96	32.96	37.16	42.54	46.63	52.44
Cleveland	28.48	34.22	37.48	36.74	26.92	26.13	18.81	38.37	42.14	45.56	49.98	55.88
Denver	33.62	38.88	40.88	36.36	34.45	28.66	21.62	44.31	52.10	60.06	67.39	75.21
Detroit	29.21	35.65	37.87	31.39	26.63	23.86	16.96	32.71	37.18	42.51	46.81	53.49
Houston	33.49	33.47	38.79	43.62	30.10	28.46	24.22	42.05	47.76	55.05	61.50	68.69
Kansas City	31.66	36.89	40.00	36.07	28.03	30.31	20.13	35.00	42.70	47.64	53.21	60.30
Los Angeles	28.68	34.90	38.63	42.22	34.75	36.18	27.29	43.06	54.80	60.83	65.43	72.14
Memphis	26.37	32.51	35.34	33.57	27.75	26.63	21.40	33.87	36.78	49.96	59.80	69.44
Milwaukee	29.35	34.89	37.85	31.43	25.37	22.18	17.58	32.47	37.54	42.78	46.50	53.06
New York	32.47	38.99	42.55	43.38	33.96	27.21	21.06	40.88	45.78	49.07	61.12	65.86
Philadelphia	30.41	38.99	41.23	43.50	31.05	28.11	20.85	39.24	46.18	50.25	61.22	65.42
Pittsburgh	35.27	40.97	45.23	43.45	37.60	30.44	21.29	29.80	41.40	47.58	53.03	60.02
Portland	28.96	32.06	38.73	36.93	32.88	34.78	27.87	44.85	49.78	57.74	70.44	....
San Francisco	29.06	34.33	39.15	42.73	35.96	35.38	26.70	44.22	52.75	60.38	67.30	73.42
Seattle	24.06	32.19	36.23	34.23	24.23	27.32	26.63	40.03	53.07	63.70	71.05	75.81
Spokane	21.21	30.42	35.65	38.02	35.00	33.77	21.97	43.01	43.20	47.52	....	58.32
St. Louis	29.11	34.60	37.31	34.59	26.19	22.90	18.40	33.87	38.12	43.51	48.85	53.69
St. Paul	28.87	33.61	36.69	38.36	26.91	23.73	17.70	33.96	37.52	42.72	47.09	53.31

Base Quantities. All HR products may be combined for quantity. Hot-rolled sheet, 10 ga x 36 x 96—120; Cold-rolled sheet, 20 ga x 36 x 120; Galv. sheet—16 ga x 36—120; Hot-rolled strip—⅛" x 1"; Plate ¼" x 84/; Shapes—I-Beams 6 x 12.5; Hot-rolled bar—Rounds ¾-2⅛"; Cold finished bar—C 1018—1" rounds; Alloy bar—Hot-rolled 8620—1⅛" round; Cold drawn—1" round; Hot-rolled 4140—1⅛" round; Cold drawn—1" round. Check local supplier for additions or deductions from base.

*Prices at all points include metropolitan delivery charges.

Codes identify Producers listed in the Key on page 84. (Prices quoted are mill base prices in cents per pound unless otherwise noted and do not reflect extras or surcharges.) N.A.=Not available.

Billets, Blooms, Slabs

(Dollars per net ton)

Carbon Rerolling, Midwest
W5 $366.00
N4 $366.00
West
C6 $346.00
Carbon Forging, East
B3(2), C10, U1 $473.00
R3 $453.00
Midwest
R3, W5 $453.00
S1, U1, I3 $473.00
C10 $473.00
K2 $453.00
West
B3(2) $483.00
C6 $453.00
Alloy, East
R3 $492.00
B3, U1, C10 $512.00
Midwest
W5 $492.00
U1, C10, I3 $512.00
R3 $492.00
S1 $512.00
West
B3 $502.00
C6 $469.00

Piling Sheet Steel

(cents per lb)

Midwest
U1 26.45

Structurals

Carbon, East
B3 22.90
U1, J3 23.90
Midwest
C20 22.90
W8 22.90
I3, T10, U1, N4 23.90
West
C6 25.10
B3(2) 21.65
South
C16, U1 23.90
T10 22.90
A8 Cmp*
High-Strength, Low Alloy, East
B3 22.90
U1, J3 23.90
Midwest
N4 23.90
W8 24.15
U1 23.90
I3 23.90
West
B3 21.65
South
U1, C16 23.90
Wide Flange, Carbon, East
B3 22.90
U1, J3 23.90
Midwest
U1 23.90
N4 23.90
I3 23.90
West
C6 24.15

Strip

Hot-Rolled, Carbon, Cut II Edge—all widths, East
U1, B3 23.75
J3 22.05
Midwest
D1 22.05
I4 22.85
J3, D1, W3 22.05
G2, G3 23.45
N4 22.55
W5, S1, A7 23.75
U1, B3, I3 23.75
M2, R3 22.05
West
B3 26.55
South
R3 22.05

Cold-Rolled, Carbon Max. 25%, East
E4 29.75
S10 29.60
P15 24.80
B4 36.60
G6 36.175
Midwest
I4 38.30
W14 32.80
J4 34.05
S1 37.05

High-Strength, Hot-Rolled, Low Alloy, Cut Edge & Mill Edge—all widths, (plus extras)*
Midwest
M2, R3, W3, J3, I3 22.05
G2, G3 23.45
S1 23.75
A7 25.35
South
R3 22.05

High-Strength, Cold-Rolled, Low Alloy, Mill Edge
Midwest
S1 37.05

Alloy, Hot-Rolled, Midwest (plus extras)*
S1 26.10
I4 25.20

Alloy, Cold-Rolled, East
C11, E4, M8 43.35
B4 47.25
P15 32.10
Midwest
I4 44.30
S1 44.80

Sheets

Hot-Rolled, Carbon (18 Ga & Hvyr), East
B3 23.75
J3 22.05
U1 23.75
Midwest
M2, R3, W3 22.05
D1, J3 22.05
G2, G3 23.45
I4 22.45
U1, W5, S1, B3, I3, A7 23.75
West
U1 24.25
South
R3 22.05

Cold-Rolled, East, Class I
B3(2) 28.15
J3 26.15
U1 28.15
Midwest
R3, M2, W3 26.15
G2, G3, M11 27.85
I4 22.00
J3 26.15
D1 26.15
U1, W5, S1, B3, I3, A7 28.15
West
U1 28.65
South
R3 24.65

Galvanized (hot-dipped), East
B3(2) 30.30
U1 30.30
Midwest
J3, D1, W3 28.00
R3, Y1 28.00
G2, M11 30.00
U1, W5, S1, I3, A7 30.30
West
U1 30.80
South
R3 28.00

Enameling, Midwest
U1, S1, I3, A7 29.65
J3 27.65

Long-Terne, Midwest
W5, A7 31.65
U1 31.65
R3 29.35

Wire Rod

East
B3(2) 22.35
Midwest
N4, K2 22.35
U1 24.10
A7 22.00
West
C6 21.45
South
G7 22.35

Tinplate

Electrolytic Tinplate
Single Reduced (70 lb)

East	per base box
J3	$26.29
U1	27.74
B3	27.54
Midwest	
U1	$27.74
J3	26.29
M11	27.24
W3	26.29
W5	27.74
West	
U1	$28.24
South	
U1	$27.74

Double Reduced (55 lb)**
Midwest
M11 $21.87
J3 21.49
U1 22.37
W3 21.49
W5 22.37
West
U1 $22.87
South
U1 $22.37

Black Plate
Single Reduced (75 lb)*
East
B3 $24.31
Midwest
J3, W5 $24.01
I3, W5 24.57
W3 24.01
U1, M11 25.26
West
U1 $25.26
Double Reduced (55 lb)
East
B3 $20.49
Midwest
M11 $19.70
W5 19.70
J3 18.93
W3 18.93
W5 18.93
U1 19.70
West
U1 $19.70
South
U1 $19.70

*70 lb—base weight extra 45¢
**50 lb—base weight extra $1.40

Bars

Carbon Steel, Hot-Rolled
(Special quality)
East
R3, K3 25.80
R5 25.80
J3 25.80
U1, C10, B3(3) 27.05
Midwest
I4 23.95
U1, I3 27.05
R3, T10, C20, N4 25.80
K2 25.80
I3 22.00*
A7 20.25
West
B3 25.80
C6 24.45
South
A8 20.65
C16 25.80

Cold-Finished Carbon, East
A11 22.15
R3 33.75
C21 21.15
J3(4), L2 31.00
M8, W10, T11, S8 31.00
N1 24.475
P4 33.25
B4 33.25
C10 31.00
Midwest
W10, R3, M9 33.25
J3 31.00
B1 33.45
L2 30.75
N9 31.00
W14 22.20
B5 34.75
West
R3 37.15
South
J3 34.00
C16 24.40
J3 31.95

Alloy, Hot-Rolled, East
R5, K3 27.95
R3, J3 27.95
U1, B3(2), C10 29.20
Midwest
R3 27.95
I3, C10, U1 29.20
I4 26.10
I3 23.50*
A7 20.25
West
B3 27.95
C6 26.60
South
A8 22.00

Alloy, Cold Drawn, East
L2 35.20
R3, N1 37.90
R4 37.10
A11 30.50
J3, W10, L2 34.85
T11, S8 34.85
C10 34.85
Midwest
R3 37.35
J3, W10, C10 34.85
B1 37.30
N9 34.85
L2 34.65
B5 38.60
M9 37.10
West
R3 40.75
South
J3 35.85
C16 28.00

Plates

Carbon Steel, East
B3 23.25
L4, U1 25.75
P2 25.75
J3 26.75
Midwest
B3 23.25
I3 25.75
J3, A7 22.80
U1, I4, S1 25.75
R3 26.75
West
C6 24.25
U1, B3 25.75
O2 23.00
South
R3 25.75
U1 25.75
Alloy, East
B3 31.05
U1, L4 33.55
P2 33.55
J3 34.55
Midwest
B3 31.05
G2, G3 33.55
I4, U1 33.55
West
B3 33.55
O2 31.00
South
U1 33.55

Wire

Carbon Steel Wire, East
B3 27.10
A11 22.15
Midwest
R3 24.60
N4, W7 27.40
K2 24.20
South
A8 22.85
West
C6 24.95

PRICES TURNED DOWN IN AUGUST

Producer prices, after charting a stable course for the April-June period and rising slightly in July, dropped a little in August, the U.S. Bureau of Labor Statistics reported.

The drop was 0.1 pct, but it sent the pessimists scrambling for their black crepe, the better to proclaim the death of the economic recovery. The August drop was, in fact, the first tumble in eight months.

Among finished goods other than foods and energy, prices increased "moderately," the government said. Capital equipment prices moved up 0.3 pct following an advance of 0.2 pct in July. That category represents 22.2 pct of the total producer price index.

Increases for light motor trucks, machine tools and mining machinery more than offset declines for heavy trucks, chemical industry machinery and plastics industry machinery. Autos' prices rose a slight 0.1 pct, mechanical power transmission equipment went up 0.5 pct, but pumps and compressors' tags dropped 0.5 pct.

Increases compared with July were logged by valves and fittings—0.8 pct—and miscellaneous metal products, 0.3 pct. Prices for most nonferrous metals continued to fall, down 0.4 pct.

The index for intermediate goods, supplies and components declined 0.2 pct, on a seasonally adjusted basis, the same as in July.

For machine tools, there was no change in prices for metal forming products and a slight 0.3 pct rise in charges for metal cutting equipment. Overall, of the 22 categories shown, 20 either went up in price or were unchanged, only light motor trucks and pumps, compressors and allied equipment registered drops. All prices were up compared with August 1983.

Analysts have been predicting slightly higher increases in producer prices and overall moderate inflation rate of about 4 pct for all of 1984.

Latest Month Covered: August 1984

Products	Index Reading For Month (1967 = 100)	Pct Change From Previous Month	Pct Change From Year-Ago Month
Metal Cutting Machine Tools	385.1	+ 0.3	+ 2.1
Metal Forming Machine Tools	425.1	0	+ 2.2
Agricultural Machinery & Equip.	337.6	+ 0.1	+ 3.1
Construction Machinery & Equip.	358.6	+ 0.1	+ 1.6
Industrial Process Furnace & Ovens	376.0	+ 0.4	+ 3.6
Industrial Material Handling Equip.	290.3	+ 0.4	+ 1.8
Pumps, Compressors & Allied Equip.	348.1	− 0.5	+ 0.7
Fluid Power Equip. (Dec. 1970 = 100)	260.7	+ 0.2	+ 2.8
Mechanical Power Transmission Equip.	327.9	+ 0.5	+ 4.1
Automobiles	221.3	+ 0.1	+ 1.3
Motor Trucks—Light	281.7	− 0.2	+ 4.1
Motor Trucks—Heavy	334.7	0	+ 6.8
Railroad Equipment	364.6	+ 0.3	+ 3.9
Fabricated Metal Structural Products	312.3	+ 0.2	+ 3.1
Electric Motors	340.3	0	+ 1.6
Valves & Fittings (Dec. 1982 = 100)	102.7	+ 0.8	+ 3.2
Ball & Roller Bearings	343.6	+ 0.1	+ 3.7
Cutting Tools & Accessories	278.9	+ 0.1	+ 1.9
Heating Equipment	255.5	+ 0.3	+ 4.2
Plumbing Fixtures & Brass Fittings	303.3	+ 0.3	+ 4.5
Metal Containers	352.4	+ 1.1	+ 4.7
Miscellaneous Metal Products	295.0	+ 0.3	+ 3.9

Data based on U.S. Labor Dept.'s Producer Price Index